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THE PROTAGONIST'S STRUGGLE IN NOVEL BLACK BOY

Overcoming Adversity: The Protagonist's Struggle Against Social Constraints in novel Black Boy

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Abstract

American writers from the mid-1920s have been primarily focused on exploring the themes of deceit, reality, and the quest for self-identity within society. African Americans in the United States have faced challenges in achieving racial equality within society, particularly following their nation's independence. Significant progress has been achieved in other fields in recent although the issue of ethnic conflict remains decades. unresolved. The work illustrated the irrational zealotry prevalent in the southern region and its adverse impact on society. Many of the challenges in Wright's family life emerge either directly or indirectly from racial discrimination. The protagonist in the novel displays resilience and a strong spirit of resistance in response to the injustices he encounters. He persists in fighting for his rights and for his humanity in a culture that aims to dehumanize him, despite facing challenges. The work explores Racism as both a hateful belief held by malevolent individuals and a complex issue intertwined within the fundamental structure of the society. The current research aims to examine the collective crucial social issues as well as oppression, racism, and brutality that are depicted in the text. This study attempts to raise awareness about racism and injustice by examining the personal experiences of Richard Wright as depicted in his biography *Black Boy*. The concepts and societal problems that are investigated in "*Black Boy*" are intricately connected to critical race theory. Critical race theory is a theoretical framework that investigates the ways in which racism and race interact with other types of oppression, such as class and gender, to influence the experiences and opportunities that individuals have in society.

الملخص

ركز الكتاب الأمريكيون منذ منتصف عشرينيات القرن وبشكل أساسي على استكشاف موضوعات الخداع والسعي إلى الهوية الذاتية داخل المجتمع. حيث واجه الأمريكيون من أصل أفريقي في الولايات المتحدة تحديات كبيرة في تحقيق المساواة العرقية داخل المجتمع، و خاصة بعد استقلال بلادهم. وقد تم تحقيق تقدم كبير في مجالات أخرى في العقود الأخيرة، على الرغم من أن قضية الصراع العرقي لا تزال دون حل.

في هذا البحث تم تسليط الضوء على التعصب الغير العقلاني السائد في المنطقة الجنوبية وتأثيره السلبي على المجتمع. العديد من التحديات في حياة عائلة رايت تنشأ إما بشكل مباشر أو غير مباشر بسبب التمييز العنصري. يُظهر بطل الرواية بمظهر مرون وروح مقاومة قوية ردًا على المظالم التي يوجهها. فهو يصر على النصال من أجل حقوقه ومن أجل إنسانيته في ظل ثقافة تهدف إلى تجريده من إنسانيته، على الرغم من التحديات التي يوجهها. يستكشف هذا العمل العنصرية باعتبارها معتقدًا بغيضًا يتبناه الأفراد الحاقدون وقضية معقدة متشابكة داخل البنية الأساسية للمجتمع.

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والعنصرية والقمع في الرواية. تحاول هذه الدراسة رفع مستوى الوعي حول العنصرية والظلم من خلال دراسة التجارب الشخصية لريتشارد رايت كما ورد في سيرته الذاتية "الفتى الأسود". ترتبط المفاهيم والمشكلات المجتمعية التي يتم التحقيق فيها في فيلم "Black Boy" بشكل معقد بنظرية العرق النقدية. نظرية العرق النقدية هي الإطار النظري في هذا البحث حيث تهتم في الطرق التي تتفاعل بها العنصرية والعرق مع أنواع أخرى من الاضطهاد، مثل الطبقية والجنس، وتأثيرها على الخبرات والفرص التي يتمتع بها الأفراد في المجتمع.

1. Introduction

The American slave story, which was the most popular type of black literary prose, helped build an African American identity in the United States. It also had an ongoing effect on black narrative strategies and topics throughout the 20th century. Afro-American writing talks about the horrible things that Black people went through, the pain they felt, and how low they were treated. In literature, topics like racism, tradition, culture, slavery, and freedom all show up. In the past few years, Black Literature has become a subgenre of current American literature. Black Americans have turned to writing books as a way to share their pain over racism with the whole world. The historical background of society's refusal to treat black people equally made black people unhappy and disappointed. Wright fought against black people being mistreated by white people and against the unfair American society as a whole. In order to find an answer to the racial problems and spread the idea of democracy, he had to deal with White dominance and oppression, just like all the other Black people. Author Richard Wright was one of the most famous African American writers of the 20th century who wrote about sensitive racial problems during a tough time. He became known for his creative expression related to the social consequences in the United States and the realities faced by African Americans as a marginalised group. He addressed the shortcomings of African Americans in American society in his writings, marking the start of the cultural renaissance of African American literature. It facilitated the development of new theories by garnering backing for the Harlem Renaissance, a movement that advocated for the advancement of black intellectuals to foster the growth of artists and drive effective social reforms. Richard Wright's literature is sophisticated and artistic, while simultaneously questioning societal standards. Blacks in Wright's works defy the established conventions of the Whites by alienating themselves from the existing order.

The Age of Richard Wright began after the Harlem Renaissance, specifically around the 1930s, and continued until the late 1950s. Richard Wright's novels and writings, among black literature, aimed to transform American culture. Wright's works suggest that history can serve as a form of retribution. Richard advocated for literature by Black authors to expose the societal disenfranchisement of black people and strive for social equality. Stoneberg supports this by stating,

Wright, as an African American writer, frustrated by the lack of social gains of the 1920s and 1930s and also influenced by Marxism, falls into this category of adopting naturalism in his novel Native Son, to reveal the social structures that disadvantages black people (Stoneberg, 2010, pp. 2-3).

Wright's understanding of African American life is deeply ingrained in his childhood in the southern United States. Throughout "*Black Boy*," he articulates his perspectives on African American life in the United States,

Whenever I contemplated the fundamental desolation of black existence in America, I was aware that the African Americans were never granted the opportunity to fully embrace the essence of Western Civilization, despite their existence inside it. Upon contemplation of the absence of cultural elements in black existence, I pondered whether qualities such as purity, positivity, affection, integrity, allegiance, and recollection were inherent attributes inherent to all individuals, irrespective of their racial background. (Wright, 2000, p.35).

This study examines the significance of societal issues and selfidentity as shown in the novel "*Black Boy*". We aim to show that Racism and oppression are key themes in *Black Boy*, particularly considering the book's publication during the Jim Crow era.

2. Literature Review

A study by Diwakar Tiwari (2017) discussed the issue of Black identity and its resistance in a predominantly white American culture. African Americans are descendants of a history marked by hardships and struggles. Identity is their concern. They experience dreams and face nightmares. The Black or Harlem Renaissance began in the 1920s and 1930s, leading to the emergence of many writers who celebrated Black culture. Richard Wright is a writer who left a lasting impression on readers with his portrayals of downtrodden African Americans. This has enabled a new generation of African American writers explore previously unknown information concerning to discrimination against Black people. Additionally, other study by Febrian Ramadhani Setiaji (2019) discussed This study seeks to elucidate the portrayal of American hunger in Richard Wright's novel Black Boy. This study is a qualitative investigation that depends on the efficacy of verbal or explanatory reasoning. The data was acquired through reading, identifying, classifying, and analyzing utilizing structuralism theories in this study. Binary operations were employed to examine the disparity between black and white society. The study revealed a clear segregation between black and white individuals in terms of treatment, power, and supremacy, ultimately showing that black individuals are being treated differently and denied freedom. The novel depicts American Hunger via incidents that involve conflicts between black and white individuals. The tension between them arose from the disparate treatment, oppression, discrimination, superiority, and deprivation experienced by black and white individuals or society. The supremacy and authority of white individuals have negatively impacted black individuals in several parts of their lives. The novel depicted American Hunger as the black people's longing while coexisting with white people in America. When discrimination, segregation, and oppression are directed towards black people, they address their American hunger by resisting racial oppression, reinforcing their resilience, and fighting against injustice. A study by Rajendra Prasad Bhatt (2022) states the African American life in Richard Wright's Black Boy. It explores how socio-cultural factors create barriers for African Americans and cause suffering within the black community. The book "Black Boy" portrays severe poverty and the author's experiences of racial violence against black people, mainly serving as a critique of the racist Southern white society. Using the narrative inquiry approach, the focus is on black American life, emphasizing racism and gender inequality. Themes prevalent in Wright's writings include the battle between black and white communities, the oppression of blacks by dominant whites, and the violence and slaughter inside black communities. This paper argues that black American literature challenges racism and injustice in order to combat feelings of self-pride and self-identity within the black community. Seeking one's identity is an ongoing process influenced by several elements from both the present and the past, as well as from individual and societal perspectives.

3. Overview of the Genre's Historical Context

Since the Declaration of Independence was signed, African Americans in the United States have fought for racial equality. The trip has been challenging. The country has made substantial advancements in eliminating racial inequality in recent decades; however, no one feels the issue has been completely resolved. *Black Boy* is a compelling account of an artist's journey to find their own identity and attain success in the American music business.

From 1908 to 1927, during Wright's upbringing in the South, "*Black Boy*" directly addressed the structural racism prevalent in society. Racism had a substantial impact on the challenges faced by many members of Wright's family, both via direct and indirect means. Wright finds racism to be widespread and intolerable upon entering the workforce. Wright's story concludes with his journey to the South and the discriminatory circumstances he encounters.

Outdated anthropological ideas have led to the development of the concept of a "racial group." This ideology emerged mainly in Western Europe during the 19th and early 20th centuries. It claimed that humans could be categorised into racial groups based on physical and behavioural characteristics linked to ethnicity, nationality, and shared language. The current usage of the terms "race" and "racial" originated from erroneous beliefs. Racial prejudice is becoming deeply rooted in the attitudes and behaviours of society, especially in Western countries.

These perspectives influence various facets of Scottish culture, perpetuating disadvantages faced by Black and minority ethnic individuals throughout generations. The concept of 'race' is closely linked to skin colour. White populations globally have not undergone the process of 'racialization' to the same extent as non-white populations. Their process of racialization yielded more advantages than drawbacks. Prejudice and discrimination against white minority ethnic groups in Scotland might be classified as xenophobic rather than racist.

Oppression is sometimes defined as the hostile or unjust exercise of authority. Oppression in the context of discrimination refers to a specific group of individuals being wronged rather than the whole public. There is no universally agreed framework or vocabulary to describe oppression comprehensively. However, scholars have identified several forms of oppression, such as social, institutional, and economic oppression. When one individual imposes their desires on another, it is referred to as oppression.

However, the concept, popularized by Marx and Engels in their 1848 Communist Manifesto, is frequently invoked to justify governmental repression. However, the Latin word oppressus is the past participle of opprimere, which means to make someone feel bad or ("to press against", "to squeeze", "to suffocate"). When governments employ tyranny to control people, they aim to instil a sense of oppression and terror in their population, making them feel constrained and threatened with imprisonment or death if they defy the authority. These governments employ tactics such as restriction, control, terror, and despair to induce feelings of hopelessness and helplessness in citizens. (American Heritage Dictionary, 2016). Taylor (2016) described (social) oppression as a more insidious kind of manipulation and control: Oppression is an unjust situation when one social group is dominated while another is favoured. Oppression is sustained through social norms, stereotypes, and institutional regulations. It happens when a social group is unfairly dominated due to a network of social constraints, including laws, institutions, biases, and stereotypes. (Taylor, 2016)

Racial disparities are increasingly becoming deeply rooted in the perspectives and actions of society, especially in Western nations. Individuals in positions of relative authority can exploit a group of people in a socially acceptable way. Social group oppression can stem from several beliefs, such as the view that individuals are persecuted due to their financial level or the belief that individuals are oppressed based on their ethnicity. The term "race" defines the concept of racial oppression or prejudice, ...burdening a specific race with unjust or cruel restraints or impositions. Racial oppression may be social, systematic, institutionalized, or internalized. Social forms of racial oppression include exploitation and mistreatment that is socially supported. (Wikipedia, 2021).

Richard Wright, a well-known African American novelist who was born in the South of the United States, is the subject of the current study, which examines his writings. Throughout the course of this narrative, which depicts a man's journey towards independence and self-definition, important themes that are explored include racism and discrimination, as well as the struggle to discover one's identity. For the bulk of their lives, the monstrous spectre of slavery hung over their heads like a dark cloud. Hatred and violence directed towards persons of different races are responsible for the deaths of a great number of people. The major themes of this autobiography are the pernicious influence of racism. In Black Boy, racism is however not only discovered as a hateful belief held by abominable persons but is also viewed as a threatening problem weaved into the very fabric of society as a whole. The characters of Olin and Pease are defined as public evil and more strikingly as players in an immense drama of compulsion, fear and odium by Wright. As far as Richard is concerned, it is not the very existence of racism that is the true problem, but the suspicion that whether these roots of racism in American culture that are so deeply rooted can be destroyed without the culture itself being destroyed. The symbolic culmination of Wright's Zealous desire of imitating an absorbing the racist world around him makes *Black Boy* more than just an autobiography. All over the work, Richard observes the harmful impact of racism not only as it affects dealings between Whites and Blacks, but also dealing among Blacks them. Wright permits his work *Black Boy* primarily stress on the word "black" the story of childhood, but at every moment book lovers are actually aware of the colour of Wright's skin.

4. Critical Race Theory

It is commonly believed that Derrick Bell is the person who established Critical Race Theory. The creation of Critical Race Theory was significantly influenced by Derrick Bell, a pioneering legal scholar and civil rights activist who played a crucial role in the process. His work posed a challenge to conventional legal frameworks and placed an emphasis on the part that race plays in the formation of US laws and institutions. With his contributions to Critical Race Theory, such as his concept of interest convergence and his use of storytelling as a vehicle for social critique, Bell has left an indelible mark on the field, and his ideas continue to have an impact on academics and activists who are working on issues pertaining to race and social justice. Critical Race Theory (CRT) is a theoretical framework that originated in legal studies in the late 20th century and has been utilized in several fields like as sociology, education, and cultural studies. Critical Race Theory aims to analyze and question how race and racism interact with systems of power, institutions, and cultural standards. Here are some essential aspects of Critical Race Theory. Critical Race Theory (CRT) is a theoretical framework that originated in legal studies in the late 20th century and has been utilized in several fields like as sociology, education, and cultural studies. Critical Race Theory aims to analyze and question how race and racism interact with systems of power, institutions, and cultural standards. Here are some essential aspects of Critical Race Theory:

1. Origin: Critical Race Theory emerged in the legal sector throughout the 1970s and 1980s, mostly among scholars of color who questioned conventional legal methods regarding race and discrimination. Key figures in the advancement of Critical Race Theory (CRT) are Derrick Bell, Kimberlé Crenshaw, Richard Delgado, and Patricia Williams.

2. Critical Race Theory highlights the interconnectedness of race with other social categories like gender, class, sexuality, and nationality. This approach acknowledges that individuals might face various types of oppression and privilege at the same time.

3. Critique of Colorblindness: Critical Race Theory questions the concept of colorblindness, asserting that disregarding race does not eradicate racism but instead sustains systemic disparities. CRT supports recognizing and dealing with racial inequalities and prejudice.

4. Interest Convergence: Derrick Bell proposed the idea that racial advancement is most probable when it coincides with the interests of those in authority. This theory emphasizes the strategic factors that impact social change.

5. Counterstorytelling is employed in Critical Race Theory to confront prevailing narratives around race and racism. Critical Race Theory aims to challenge dominant power systems and elevate different viewpoints by focusing on the voices and experiences of oppressed people.

6. Structural Inequality: Critical Race Theory analyzes the presence of racism within societal frameworks, organizations, and regulations. It emphasizes how power structures sustain racial inequalities by favoring some groups while putting others at a disadvantage.

7. Critical Race Theory is frequently linked with action and advocacy for social justice. Those involved in Critical Race Theory want to utilize their research and analysis to advance racial fairness, confront institutional racism, and support legislative reforms that tackle racial inequality.

Critical Race Theory offers a critical perspective for examining and comprehending the intricacies of race relations, power structures, and socioeconomic disparities. It has had a significant impact on shaping conversations around race, law, education, and social policy, leading to crucial talks about structural racism and the necessity for radical change.

5. Examining the Black Boy Critically

5.1. Richard Wright's professional career in Black Boy

Richard Wright was born in 1908 on a plantation in Natchez, Mississippi, and lived there until he died in 1989. His father was an African American sharecropper, and his mother was a schoolteacher. During the beginning of World War I in 1914, as cotton prices dropped, Wright's father moved to northern industrial towns and then settled in Memphis, where he worked as a night porter in a drugstore. Wright's youth involved relocating frequently in the southern region, attending several schools, and working in numerous jobs after leaving his family because of urban stress.

During the Great Depression, he moved to Chicago, where he worked various jobs and wandered until he joined the American Communist Party. Richard Wright has long held a strong aspiration to become a writer. Between 1932 and 1944, Wright's writings demonstrate his conviction that communism is the sole system capable of reinstating human values on Earth, as stated in his autobiography. Edgar Wright's memoir "Black Boy" (1945) reflects the Marxist perspective portrayed by Bigger Thomas in the novel. His influence on modern black writing is unquestionable. He pioneered the black protest book and delved into naturalism from the perspective of African Americans, creating a new literary tradition. This book thoroughly explores the ethical challenges faced by those living in the Jim Crow South, highlighting the persistent issues that continue to affect both black and white Americans in modern times. Wright died in 1960 while abroad.

5.2. An introduction

Richard Wright's novel "*Black Boy*" (1945) illustrates the protagonist's self-education and the impact of racism on his life. The portrait depicts his impoverished family in Natchez,

Mississippi. It portrays his futile attempt to break free from poverty and evade mistreatment from White individuals. The novel chronicles his experiences as a wanderer and explores the resilience of urban life. Wright was shocked by the alienation caused by economic progress. Wright portrays in Black Boy the lethal poverty imposed by Whites as a means to control black individuals. Black Boy illustrated the impact of Racism, whether on an individual or aggregate scale, as a prevalent issue in the Southern region. The story elucidated the insignificant and bewildering conditions of living in the South. It revealed the conditions of black living people, highlighting harsh malnutrition as a prevalent issue during the Great Depression. Richard Wright's books aim to reveal white and black civilizations as constructed narratives of racial superiority that thrived by marginalising and defaming black men. The legitimacy of White culture is questioned due to the discrepancy between its ideals of justice, opportunity, progress, order, and rationality and the harsh realities of abuse and deprivation faced by the black population, leading to their confinement. The purpose of revealing this is to reveal the discrepancy between the ideologies of White culture and its practices related to black challenges the fundamental It individuals. beliefs and assumptions of Whiteness, providing evidence that is based on a fundamental and optimistic view of oneself and others. According to Wright's visualisation, black manliness is seen as an identity in crisis because it does not align with the humanistic norms of power and education that encourage white systems of identification related to social norms and racial unity.

Wright's novel challenges and tests the latent enlightened assumptions of White civilization by depicting how a black male surpasses an ordinary redness. Abdul Jan Mohamed (1995) describes a frequent technique for differentiating proof, in which the explosion and distortion of the black subject are transformed into a location for investigating how White culture creates knowledge and values. In addition, Abdul Jan Mohamed contends that Wright's primary academic distraction is the difficulty of recognising his own distinctive arrangement as a black subject by both white and black cultures. In addition, Abdul Jan Mohamed contends that Wright's primary academic distraction is the difficulty of recognising his own distinctive arrangement as a black subject by both white and black cultures:

All groups define their identities through some form of binary opposition to other groups [and] the very process of suturing the (relative) 'homogeneity' that is crucial to the definition of that group's 'identity' . . . also simultaneously constitutes the process of rupturing various subjects on its borders the border subject becomes the site on and through which a group defines its identity. (Mudimbe-Boyi, 2012, pp.231-32).

Despite the fact that the origins of racial identity can be traced back to the history and social practices of the United States, Wright does not solely concentrate on this aspect of the concept. Instead, he uses it as a metaphor, a signifier that removes both white and black identities from essentialist interpretations of reality and places them within the historical context of a racial conflict over significance and power. In another one of his oneof-a-kind situations, he questions the identity of white people by pointing out that, just like the identity of black people, white people are a "picture" that is the consequence of societal innovations. Through his explanation, he illustrates how African-Asian pioneers in the postcolonial era perceive whiteness:

The 'White man' is a distinct image in Asian-African minds. This image has nothing to do with biology, for, from a biological point of view, what a 'White man' is not interesting. Scientifically speaking the leaders of Asia and Africa know that there is no such a thing as race. It is, therefore, only from a historical or sociological point of view that the image of 'White man' means anything (McKenna, 2015, p.239).

It is Richard Wright's autobiography that is titled "*Black Boy*." A representation of what it is like to live in the southern and northern regions of the United States is presented here. This is what it really is like to be a black person living in the South during the "Jim Crow" era. It is through the presence of his father in the household as well as his feelings about him that the story starts to become more difficult to understand. As far as he

is concerned, his mother was a black woman who revered God and was also extremely terrified of the white people who were in her immediate vicinity.

Because the main character's father deserts the home, the members of the family are left defenceless against the consequences of poverty. Richard's mother suffers a severe blow as a result of this, and she is unable to handle the pressure and consequently becomes ill. The terrible existence of the main character, who is forced to move between families in order to make a living, as well as his passion for reading comes to light in this story. The narrative does a good job of depicting the significance of education and the type of education that is determined by white people for black people. Having been unable to survive the events that took place in the South, Richard travels to the North in the expectation that he will discover more favourable living conditions and greater prosperity there. Once he arrives in the North, he realises the bitterness of truth when he discovers that the so-called liberal North is characterised by the prevalence of white dominance, job discrimination, and racial segregation. In the first place, Richard Wright chose the term "Black Boy" for his work because of the emphasis that is placed on the word "black." Although this is a story about Wright's youth, the colour of his skin is something that he thinks about on a regular basis. Not only is he growing up in the United States of America, but he is also growing up as a person of African descent. When Richard is approached by white individuals in the story, he is treated harshly the bulk of the time. This is primarily due to the fact that his skin tone is darker than theirs.

The subtle racism that Richard Wright experienced was more significant to him since it prevented him from establishing frequent connections with white people who regarded him with a similar esteem (for example, the Hoffmans or Mr. Crane) or who treated him in a manner that was comparable to that of black people. A review of the black community is included in Wright's research on racism in the United States. Wright found that the black community, and in particular the black society group, was unwilling to teach him in a manner that was appropriate. When he first became aware of the imaginative potential of literature, he witnessed a reflection of his own dissatisfaction in the brutality of fictional characters that were prevalent in modern American writing at the time, "I vowed that as soon as I was old enough, I would buy all the novels there were and read them to feed that thirst for violence that was in me, for intrigue, for plotting, for secrecy, for bloody murders" (Rowley, 2008, p.10).

5.3. Community and the individual

The story of Black Boy is about a man who is carving his own path in life. Wright finds himself in a hostile environment with no choice. As a result of his experiences in the South, he struggles with emotions of rootlessness, white authoritarianism, and black expectations for "normal" behaviour. Despite his desire to go to the north, he is unable to escape the challenges that he is facing in Chicago. During his time there, he struggles with the vastness and anonymity of the metropolis. However, despite his best efforts, he is not always successful in his pursuit of peace and human connection. According to Wright's observations, whites in the South tend to group all black people together. These individuals do not believe that there is such a thing as a black identity. Because of this, many white people have come to the conclusion that Wright is a thief, a liar, and a killer. The law enforcement officers warn Wright not to ride his bicycle by himself into white communities. As soon as Wright communicates his aspiration to pursue a career in optometry, Pease and Reynolds criticise him of being overly assertive in his pursuit of this opportunity. Throughout the South, racism can be defined as the systematic denial of black identity. Because black people lack the ability to express their uniqueness, white people believe that the form of servitude that existed during the Jim Crow era will continue to be the norm. On the other hand, Wright must contend with a significantly more challenging situation inside the black community. Granny, Addie, and Uncle Tom are all of the opinion that it is very "weird" or "soft" that Wright wants to leave the South and pursue a career as a writer. Every one of them stresses the importance of Richard "falling in line" with the teachings of Christianity. They want him to continue living with them and to stay in Jackson for the foreseeable future. In Memphis, black workers like Shorty and Harrison are more concerned with "not making waves" or impressing their white bosses than Wright discovers in his research elsewhere. This is consistent with what Wright finds in other places. Wright decides to go to Chicago as a result of his discontent with the black resignation procedure.

It is his hope that he will meet other people who are not frightened to embrace their own black cultural history from that location. Nevertheless, this is not the case in the city of Chicago. The other black writers, activists, and political personalities who are present at the gathering are among those with whom Wright does not share the same viewpoint. As long as he does not adhere to the rules of the Communist Party or the John Reed Club, he will not be able to join either of those organisations. His ire is directed towards black actors who are willing to accept stereotyped portrayals of black life on stage. According to Wright, whenever he goes in quest of a genuine black community, he finds that white supremacy has perverted it in some way. This is something that Wright discovers whenever he conducts his search. Wright is motivated to achieve greater success as a reader, writer, and thinker by the feelings of isolation and a sense of not belonging that he experiences. Reading and writing, in Wright's view, are the ultimate expressions of individualism because they enable one to challenge the assumptions that society has for what constitutes "normal" black behaviour through the medium of written communication. Reading and exerting himself in a manner that is calm, methodical, and determined are the means by which Wright cultivates his own unique voice. The beginning of this work takes place in a private setting, despite the fact that it is intended for a large audience and deals with social themes. Wright goes back to his study near the end of the memoir in order to continue working on his own behalf in order to further his professional development. This is because of the consequences of his actions.

5.4 Black Boys and the Jim Crow era

Violence has undoubtedly been ingrained in American culture for an extended period. American colonists and subsequent Americans were excited about America because it promoted freedom of religion, speech, and thinking in all its variations. From the beginning, American civilization was founded on various forms of oppression and injustice, including the complete denial of slavery as a valid form of ownership. This outcome can be viewed as a significant historical puzzle in American history. It is important to examine the living conditions of the black community in Southern America, particularly in Mississippi where Richard Wright's novel Black Boy is set, to gain a more specific understanding of the issue of violence in America as mentioned earlier. The United States Constitution explicitly declares that "all men and women are created equal,"(Ginzberg, 2010, p.5), but black people were consistently dominated in the South during the first half of the twentieth century as a result of Jim Crow Laws. Whites employed many methods to hinder blacks from attaining citizenship in the United States. Furthermore, they established groups of assassins with the specific aim of targeting African Americans. In the early 20th century, Wright examines the conflict between European-Americans and African Americans in his novel. Due to this mindset, the novel experiences a progression. Richard's strained relationship with white people was influenced by the challenging social dynamics of the Jim Crow Era, which also contributed to tensions among African Americans. Richard's family was in such a desperate situation that I would like to provide a more detailed explanation. Many American states enforced severe penalties on individuals of colour under "Jim Crow" legislation from the 1880s until the 1960s. Most laws prohibited interracial marriage and mandated public organisations businesses and to practise racial segregation. Blacks were economically capable but faced discrimination from non-prejudiced white folks who refused to hire or serve them. Historians assert that the phrase "Jim Crow" originated in 1830, when a white minstrel named Thomas Daddy

Rice performed in blackface and sang a ballad called Jump Jim Crow. While travelling across the American South, he encountered either an elderly black guy or a young teenager dancing and singing exuberantly, with sentences that concluded with "I jump Jim Crow." Other Chroniclers claimed that a young guy named Mr. Crow possessed a slave, leading Thomas Rice to act in a certain way, causing the frequent reference of Jim Crow throughout the book. Abraham Lincoln's Emancipation Proclamation of 1863, which freed the slaves in the southern United States, was violated throughout the Jim Crow Era. Discrimination was established as the fundamental rules and regulations in the southern states of America following the 1896 Supreme Court ruling that the Constitution of the United States did not forbid discrimination, "separate but equal"(Berrey, 2015, p.149). Whites and blacks have legal equality in accessing opportunities. Jim Crow laws have gained more significance following the Supreme Court rulings in the 1880s and 1890s. After the Civil War, numerous slaves were freed and started to establish themselves in the United States of America. Adapting to their newfound independence was a challenging path for them. Excluding blacks from politics not only halted racial activities but also resulted in the loss of any connections with blacks. Homere Plessey attempted to repeal racial segregation by pretending to be semi-white for six years. He was detained on a train for sitting in a seat reserved for white people.

Plessey was hauled to court, where he was found guilty and sentenced to prison. This occurrence is remembered as a notable historical event in American history, known as Plessy v Ferguson. The Tribunal determined that Plessey had been awarded equal rights since diverse but equal locations had been guaranteed for both African-Americans and white folks by the Civil Rights Act of 1875, which said that all people must be given the right to enjoy equally and completely "the accommodations, advantages, facilities... and other places of public discrimination on a railroad and in public sites" (McNeese, 2009, p.49). The white legal system worsened the problem by implementing regulations that created difficulties for black individuals during elections and deprived numerous African Americans of their voting rights. White racial discrimination in the United States escalated significantly during the latter two decades of the eighteenth century. Another manifestation of racism promoted by white segregationists was White Supremacy. When White Supremacy was confronted in the South, recently freed blacks were fearful of whites protecting their beliefs. Black individuals have faced violent attacks due to their pursuit of self-determined freedoms.

6. Prejudice

Racism as an interpersonal obstacle is a well discussed subject in literature. *Black Boy* explores Racism as a harmful concept upheld by malicious individuals, while also delving into Racism as a pervasive issue ingrained in the fundamental structure of society. Wright portrays characters like Olin Pease in his story as both malevolent individuals and minor figures in a broader narrative of animosity, dread, and subjugation. This is quite disturbing. Richard must do more than simply acknowledge that Racism is a problem. The fundamental issue, according to him, is that the deep-seated roots of racism in American culture make it difficult to imagine removing them without causing harm to the culture.

Richard's studies demonstrates that Racism negatively impacts both white-black interactions and black-black relationships. Wright selected the title "*Black Boy*" for his piece primarily to highlight the significance of the adjective "black," underscoring the focus on the color of Wright's skin throughout the account of his boyhood. He is maturing in the United States as a black individual. Richard finds it challenging to mature without being commonly characterized as a "black lad." Wright delves deeper into his argument against institutionalized Racism in the legal system throughout the book. Multiple readers believe that Wright has effectively presented an argument for this early on in the piece.

However, due to the intense focus on Bigger's actions in the first two novels, the author might need to reiterate the societal evils that Bigger thought he was fighting against in the third book. Wright seems to be restating his critique of the criminal justice system and racism. The themes of eighteenth-century bias and the author's development as a writer are intertwined in *Black Boy*. (Gallantz,1985, p.70). Richard Wright's fiction addresses institutionalized unfairness, bigotry, and violence in 20th-century America by incorporating various critical perspectives and fictional representations of these issues. *Black Boy* explores Racism and racial identity in the South through a narrative that is both individual and widely relatable.

Richard was mesmerised as a child by the difference in skin tone between people with light skin and people with dark skin. Seeing the fervour of white zealots and the paranoia of some black families, on the other hand, helps him fully understand how important this cultural and political singularity is. The terrible effects of Southern racism are shown in the story of a *Black Boy* in the Deep South. It also shows that racial differences are not "deep-rooted" or "biological," but due to an unfair society. By the end of his piece, Jan Mohamed: As Jan Mohamed concludes in his essay:

Black Boy is remarkable not so much for its rebellion as for the control that Wright had to exercise and the internal struggle that he had to wage against being engulfed by the racist sovereignty. (Rampersad, 1995, p.p. 118)

The novel addresses the prejudice prevalent in the Southern United States throughout Richard Wright's upbringing from 1908 to 1927. Many of the challenges encountered by Wright's family are a result of Wright's racial intelligence, either directly or indirectly. Upon entering the workforce, Wright finds that Racism is prevalent and unacceptable. The tale ends with Wright escaping the South and the harsh conditions he had to endure there (Spark Notes, 2003). The Black Boy is forced to learn fundamental truths about life while surrounded by an environment of fear, starvation, hatred, and violence. This places his life in a dire predicament:

My sustained expectation of violence had exhausted me. My preoccupation with curbing my impulses, my speech, my movements, my manner, my expressions had increased my anxiety". (Wright, 2000, p.197)

There are gender-based assumptions throughout Black Boy, in addition to Wright's preconceptions regarding race and socioeconomic status. He notices the presence of in one of the churches he attends "wobbly bosomed black and yellow church matrons" and "skinny old maids" (Wright, 2000, p.178), women he looks at but not with. Wright witnessed a young black woman getting smacked on the buttocks by a white police officer, and when Wright inquires as to how she can bear such treatment, she says that it doesn't matter. While she may have missed the message, we have to wonder whether Wright isn't missing it as well when he doesn't consider why she may tolerate disrespectful behavior from a white man: doing anything else may have resulted in dire consequences for both her and Wright. A doubtful social viewpoint also informs Wright's replies to the black families he sees when he works as an assistant to an insurance agent named Brother Nance:

Many of the naive black families bought their insurance from us because they felt that they were connecting themselves with something that would make their children 'write'n speak lak dat pretty boy from Jackson'. (Wright, 2000, p.160)

He later describes those individuals as "walleyed yokels" (p. 161), indicating Wright's social biases. He recognises that social classes are manmade creations, "The constructed nature of race and class" (p. 218). Although he understands social class as a concept, he is unable to regulate his feelings towards it. The novel is a memoir that narrates the challenges faced by a young African American man as he tries to survive in the Deep South. The essay "The Ethics of Living Jim Crow" by Richard Wright states that: "But the color of a Negro's skin makes him easily him suspect, converts recognizable, makes him into а defenceless target" (Lamore, 2017, p.132). To prevent being a target of white hostility in the American urban environment, he has gained valuable insights from his personal encounters with them, "I was learning rapidly how to watch white people, to observe their every move, every brief expression, how to

interpret what was said and what left unsaid" (Wright, 2000, p.183). Richard Wright's black protagonists must exhibit a meek and obedient attitude to avoid encountering hostile manifestations of white racism. Many readers perceive that Wright's challenges mirror those encountered by any perceptive and defiant people residing in an environment that does not appreciate those traits. The novel's denouement symbolises a transition towards a new writing profession and personal identity rather than just an escape from racism.

7. Writing is a Form of Protest

It is clear that Richard Wright was a "committed writer," as Mikael Anderson put it in an article in the New York Times on August 26, 2001. For him, literature was a kind of protest, and therefore he believed in the necessity of using the word as a weapon with which the writer would defend his opinions and ideas. Naturally, he was helped to embrace this position by his position as a Negro in a society based on racial discrimination and the superiority of whites over blacks. His joining the Communist Party also had an impact in deepening this view, in addition to his own observations of the atrocities committed by whites, especially in the South, against blacks, and what he knew about the history of slaves in America. The huge, important question that kept pressing him throughout his life, since childhood, was: Why this discrimination against the black person? He never succeeded in arriving at a satisfactory and convincing answer. Rather, he remembers that when he used to ask his mother when he was a young boy about the secret of this distinction, the answer was always: Don't you stop asking such stupid questions? In his book on "American Hunger," which is an extension of his autobiography in the book "The Black Boy," he states that "in order for white America to understand the Negro problem, it needs to be bigger, stronger, and tougher than what we know about it so far." This is a harsh statement that reveals About the lack of respect for the conditions existing in the homeland to which he belongs, despite his emigration from it. In fact, this book includes a group of expressions that need to

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be considered for a long time because they are revealing expressions. He says, for example, (I feel that America's past is very shallow and that its national character is characterized by a high degree of Superficial optimism, and her morals are so tinged with color hatred that prevents her from accomplishing such a complex task (i.e. understanding the Negro problem). He himself summarized his life story in short phrases, but full of meaning, as he used to say that his life story was the story of a simple Negro farmer, but a distinguished artist and writer, the story of a black Negro man who marries a white American woman, the story of a communist who refuses to continue affiliation with communist organizations, The story of a writer who does not want, or even cannot, write like other writers write, and so he imposed on himself the loneliness that he considers to be the inevitable natural state of man. He also believed that he was the only Negro who was difficult to subjugate, subjugate, and tame to the demands of the white man and the colonial countries, and that he was paying a heavy price for that. The price was truly heavy, especially in the last ten years of his life, when the communists and the enemies of communism (the American Central Intelligence Agency) joined forces against him. Perhaps the best thing that was said about it was James Baldwin's in short, eloquent statement: "He was a Negro and a writer who succeeded in proving that this was possible."

Conclusion

For a long time, African Americans in the southern United States were haunted by the terrifying nightmare of solitude. African Americans experienced genuine unhappiness, dissatisfaction, dread, and fear during America's isolation period. Richard was continuously concerned with concerns Wright of identification; he painted a distinctive portrayal of man's struggle to combat race, deception, and corruption as modern issues. Richard Wright tried to portray identity and pleasurable fragmentation as a challenging image of modernism throughout the first half of the 20th century in this essay. Additionally, Wright's writings revealed discontinuous wonders as an illness

that undermines Black people's efforts to explore their identity during the twentieth century. Additionally, he illustrated how racism and wrongdoing caused psychological and mental clutter in members of society. Wright's works run against to the social obligations and status that modern civilization has acquired. In addition, his writings adopted many societal standards and shifted toward inclusivity to make his society's problems seem like universal problems. Throughout the years 1908 to 1927, the South of the United States experienced racism, violence, starvation, and deprivation, among other challenges, in the novel. Finally, throughout the entirety of his existence in the Jim Crow South, Richard Wright looks for his identity. Despite the fact that Richard's ethnicity inevitably causes people to assume certain things about him, he managed to defy these notions and create a life in which he was absolutely in control. Since Afro-Americans have long suffered from stolen rights, Richard Wright has made a concerted effort to depict their plight truthfully. In conclusion, the whole story of *Black Boy* (his autobiography) is traced with isolating the protagonist whenever he gets a chance of realizing his potentialities. Numerous readers feel that many of Wright's suffering are those of any sensitive and rebellious individual in a world that doesn't esteem those qualities. They understand the novel's conclusion less as a flight from racism and more as a move in the direction of a new career and identity as a writer. Wright also comments on the emotional life of Southern Blacks. Despite achieving freedom and a statue of liberty after centuries of struggle, the black community experienced persistent nonetheless discrimination and dehumanising prejudice. The researcher argues that African American society faces multiple obstacles that can only be resolved through government action through the enactment of legislation and constitutional laws that guarantee fairness and parity for all segments of society. Imposing punitive measures on persons who partake in racist conduct or denigrate others. The findings of this study indicate that racial bias is not primarily rooted in skin colour, but rather in the cognitive processes of individuals. Racial prejudice does not originate from physical

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characteristics, but rather from the cognitive processes of individuals. Consequently, the resolution of racial prejudice, social alienation, and other forms of inequality necessitates a primary focus on addressing the cognitive distortions that have fostered erroneous beliefs throughout millennia regarding the superiority of one race over another. The underlying cause of this racial intolerance is from the erroneous belief that the human race is fundamentally composed of distinct races and many social classes, and that these diverse human groups possess distinct cognitive, ethical, and physical abilities that necessitate distinct approaches to interactions. There exists a singular human race. We are a unified human community residing on a single planet, united by a shared fate and conditioned to exist as a unified entity. Acknowledging this reality is the most effective remedy for the affliction of racism, apprehension towards others, and other forms of prejudice. These notions exemplify efficacious measures towards achieving a fair and harmonious global society; nonetheless, they in isolation are inadequate in eradicating the profound anguish caused by racism and other manifestations of intolerance. In conclusion, it posits that the governing concept of the social entity should be justice, and comprehensive taken advocates for measures to be by governments, international agencies, and civil society organisations to effectively tackle economic inequality across all societal strata.

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Classification of Liver Cancer by Using Data Mining Techniques

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Abstract

Diseases are one of the factors that lead to death, especially cancer, as liver cancer is a serious and life-threatening disease, and artificial intelligence technologies play a major role in early detection, improving patient survival rates, and reducing the physical and psychological pain that the patient feels. In recent years, data mining techniques have been widely applied in the medical field to facilitate disease diagnosis and classification. This study aims to develop a professional model for early detection of liver cancer using artificial intelligence algorithms such as the logistic regression algorithm and the decision tree algorithm, where the given data is accepted as input to the system and the extracted characteristics give only two outputs (zero or one). The results showed that both algorithms are effective in detecting the disease and reducing the rate of related deaths.

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المستخلص تعد الامراض احد العوامل التي تؤدي الى الموت وخصوصا امراض السرطان فسرطان الكبد من الأمراض الخطيرة والمهددة للحياة، وتلعب تقنيات الذكاء الاصطناعي دورا رئيسيا للكشف المبكر عنه و تحسين معدلات بقاء المريض على قيد الحياة وتقليل الألم الجسدي والنفسي الذي يشعر به المريض. في السنوات الأخيرة، تم تطبيق تقنيات استخراج البيانات على نطاق واسع في المجال الطبي لتسهيل تشخيص الأمراض وتصنيفها. تهدف هذه الدراسة إلى تطوير نموذج احترافي للكشف المبكر عن سرطان الكبد باستخدام خوارزميات الذكاء الاصطناعي مثل خوارزمية الانحدار اللوجستي وخوارزمية شجرة القرار حيث تقبل البيانات المعطاة كمدخلات للنظام والصفات المستخرجة لتعطي مخرجين اثنين فقط (صفر او واحد). أظهرت النتائج أن كلا الخوارزميتين فعالتان في الكشف عن المرض وتقليل نسبة الوفيات المتعلقة .الكلمات المفتاحية : سرطان الكبد, الانحدار اللوجستي , شجرة القرار.

Introduction

Liver cancer, also known as hepatocellular carcinoma (HCC), is the leading cause of cancer-related deaths worldwide [1]. The cell is replaced with a fresh one if it gets old or broken. Every now and again, something goes wrong during the operation. In contrast to the fact that the body does not manufacture new cells, that making it the third greatest cause of cancer-related fatalities, according to GLOBOCAN 2020 [2]. Early cancer detection, according to studies, can increase survival rates. The majority of liver cancer patients are already in the middle or late stages when they are detected, and there are few therapeutic choices [3, 4], as the early indications of liver cancer are not always visible. [5] As a result of these variables, the prognosis for liver cancer is poor. [6] Designing a technique that can efficiently perform an early diagnosis and aid in improving the treatment outcome of liver cancer is therefore of utmost practical relevance.

Artificial Intelligence Techniques are used in the KDD process to extract patterns from data. Artificial Intelligence Techniques used determine the patterns that can be found. Data mining tasks can be broadly divided into two categories: descriptive tasks that explain the general characteristics of the existing data and predictive activities that make predictions using the data at hand. Data that are numeric, textual, or multimedia can all be mined for information. Different types of parameters can be used by data mining applications to analyze the data. They consist of association (patterns where one event is linked to another event), sequence or route analysis (patterns where one event precedes another event), classification (detection of novel patterns with specified goals), and clustering.

A decision tree is a tree whose internal nodes can be taken as tests (on input data patterns) and whose leaf nodes can be taken as categories (of these patterns). These tests are filtered down through the tree to get the right output to the input pattern. Decision Tree algorithms can be applied and used in various different fields. It can be used as a replacement for statistical procedures to find data, to extract text, to find missing data in a class, to improve search engines and it also finds various applications in medical fields. Many Decision tree algorithms have been formulated. They have different accuracy and cost effectiveness. It is also very important for us to know which algorithm is best to use[9]. The ID3 is one of the oldest Decision tree algorithms. It is very useful while making simple decision trees but as the complications increases its accuracy to make good Decision trees decreases. Hence IDA (intelligent decision tree algorithm) and C4.5 algorithms have been formulated.

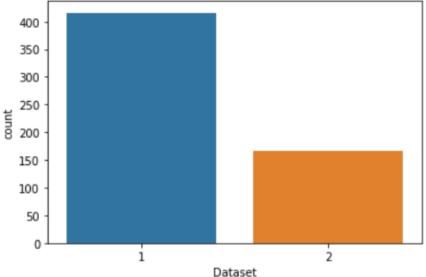
Logistic Regression it is the most powerful artificial intelligence algorithm and is a possible modeling process to obtain a good result from what the input contains. Most commonly used logistic regression models for binary outcome; Something, for example, has two outputs, either zero or one, and so on. Multinomial logistic regression can be used if the outcomes are more than two[10]. Logistic regression is a useful analysis method for classification problems, as it attempts to determine whether a new sample better fits the category. The Logistic Regression algorithm is used to create a model to detect a disease through the input data. It analyzes the data and identifies the characteristics that lead to diagnosing the disease and gives good accuracy for the diagnosis.

In a form of machine learning known as speed-up learning, problem solvers use their prior knowledge to find solutions to problems [11]. It looks at the experience of the preceding problem-solver and follows their methods and solutions. There is a distinction between rote learning and learning based on explanations. Generally speaking, rote learning is the more conventional method, and seeking counsel is the way to learn. Advice in this type of learning may come from a range of sources, including human experts and other online resources [12]. A decision tree is used to direct the learner through the process while using the inductive learning technique known as learning by example. This algorithm is built on the ID3-acquired Quinlan's algorithm. It is the inductive learning process [13]. The aim of the paper is to predict the liver cancer using Artificial Intelligence Techniques .

However, it is important to acknowledge the limitations associated with these AI algorithms[14] [15]. The accuracy and reliability of the predictions heavily depend on the quality and availability of input data. Insufficient or biased data may lead to inaccurate results, potentially compromising the effectiveness of liver cancer screening [16] [17]. Additionally, the interpretability of AI algorithms, especially decision trees, can be challenging, hindering the understanding of underlying factors contributing to the predictions [18].

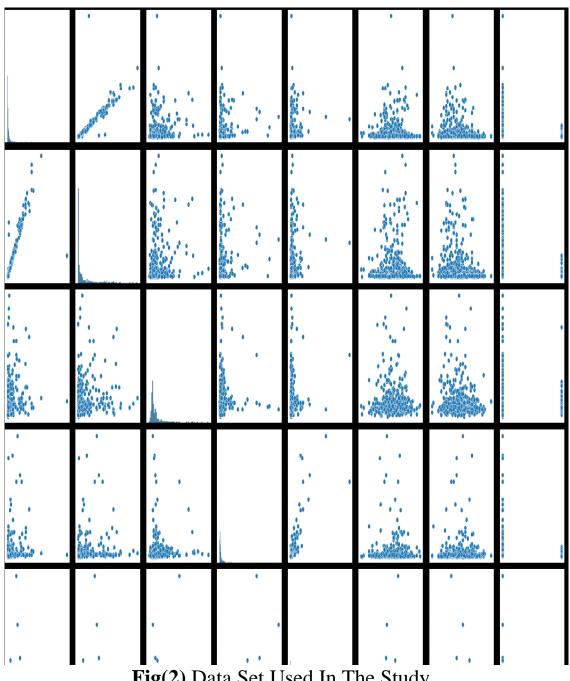
Materials and methods

The data that been used consist of 584 patient from different gender and symptom, the data of the cancer shown in figure (1).



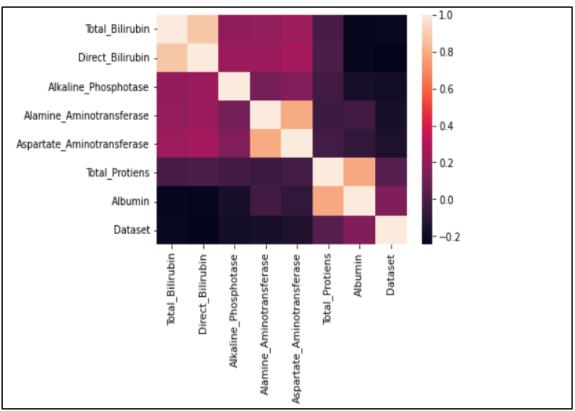
Fig(1) Diagnosis of Liver Cancer.

Figure (1) indicate that number one refer to the cancer and number two to benign , the data that has been used is shown in figure (2).



Fig(2) Data Set Used In The Study. And the correlation of the data is shown in the figure (3).

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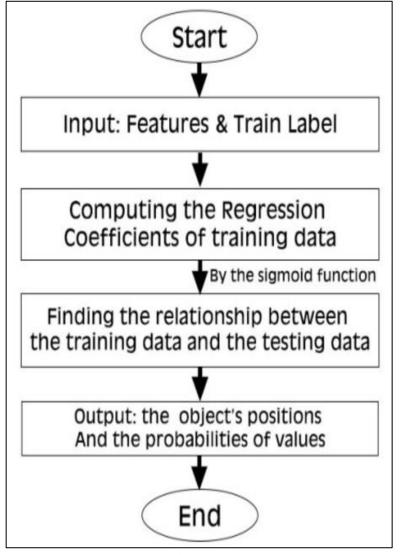
Fig(3) Correlation of the Data.

As shown in figure 3 there is a strong relationship between Total _Bilirubin and Direct _Bilirubin .

Results and Discussion

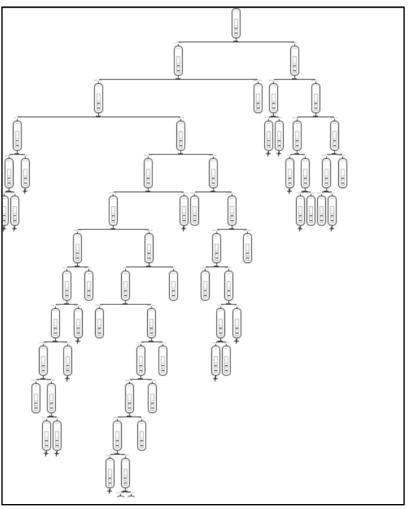
The findings from the integrated search revealed a substantial body of literature exploring the use of AI algorithms, particularly logistic regression and decision trees, in liver cancer detecting. These algorithms have demonstrated promising results in terms of accuracy, sensitivity, and specificity. Logistic regression, a statistical modeling technique, has been widely utilized for predicting the probability of liver cancer based on various risk factors. On the other hand, decision trees have shown potential in identifying relevant risk factors and creating classification models for accurate screening.

Two algorithm were used which are logistic regression in figure (4) and decision tree classifier in figure (5).



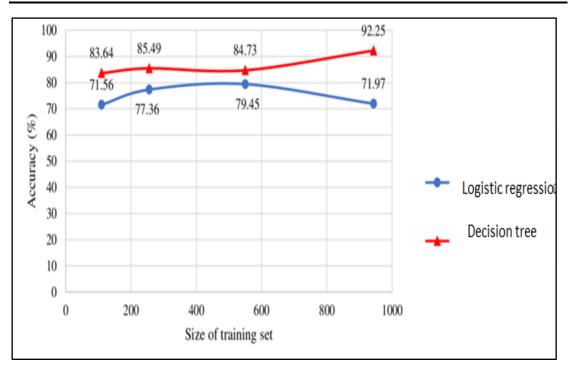
Fig(4) Logistic regression.

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Fig(4) Decision Tree.

The accuracy of both decision tree and logistic regression are 0.92 and 0.72 respectively.as show in fig (6).



Fig(6) logistic regression and Decision Tree Performance.

Conclusions

Cancer is considered the most dangerous disease, especially liver cancer, in terms of its cure rate and also because of the psychological fatigue and exhaustion this disease causes. Since effective early diagnosis helps improve treatment of liver cancer, there is an urgent need for a method that can accurately diagnose liver cancer before it becomes impossible to treat. Artificial intelligence algorithms, such as logistic regression and decision trees, have been used in liver cancer screening. These techniques hold promise for improving early detection and diagnosis. In summary, logistic regression and decision tree algorithms were successfully applied to build a classification model based on a liver cancer dataset and both algorithms show successful disease detection.

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Class Nearly kahler Manifold of M – Projective Curvature Tensor

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Keywords: Class Nearly kahler Manifold , M – Projective Curvature Tensor

Abstract

The recent study contracts with new three classes of the nearly kahler manifold of M – projective curvature tensor. The purpose of this paper to compute differential - geometrical and topological properties closest for new classes $\overline{M}_1, \overline{M}_2$, and \overline{M}_3 , through it ,an equivalence relationship was achieved between these classes and one of or more the tensor compounds and the components of curvature tensor and with adjoint G-structure space. Lastly, we determine a relationship between M_1, M_2 , M_3 with each other.

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كلاسات تنسر الاسقاط من النوع M في منطوي كو هلر التقريبي علي خلف علي وزارة التربية, المديرية العامة لتربية ديالى alikhalafali1985@gmail.com وسام عباس حسين وزارة التربية, المديرية العامة لصلاح الدين wissam.abbas1987@gmail.com جامعة تكريت - كلية التربية للعلوم الصرفة, العراق صلاح الدين - تكريت . علي عبد المجيد شهاب

المستخلص في هذا البحث ندرس كلاسات جديدة للتنزر الاسقاطي من نوع M لمنطوي كوهار التقريبي مع نظريات جديدة اي اننا نجد فئات جديدة $\overline{\mathrm{M}}_1, \overline{\mathrm{M}}_2$, and $\overline{\mathrm{M}}_3$ ثم قمنا بانشاء علاقة بينها وبين مكونات تنزر الانحناء الاسقاطي واخيرا نكتشف علاقة بين $\mathrm{M}_1, \mathrm{M}_2$, M_3

Introduction

The conception of AH-Almost Hermitian structures states that there is a universal rule for classifying AH- structures using the second order symmetry features of the Riemann-Christoffel tensor's invariants of differential geometry. Based on the theory advanced by A. Gray and developed within a number of respective works [1] and [2]the essential to understanding the differential-geometrical characteristics of Kahler manifolds is to establish the identities of them that satisfies. Gray and Hervella[3] founded that the action of the unitary group U(n) on the space of all tensors of type (3,0) decomposed this space in to sixteen classes. Following are the components that make up the Riemann curvature tensor:

 \overline{M}_1 if $< M(\alpha, \beta)\theta, \gamma > = < M(\alpha, \beta)\Psi\theta, \Psi\gamma >;$ \overline{M}_2 if $< M(\alpha, \beta)\theta, \gamma > = < M(\Psi\alpha, \Psi\beta)\theta, \gamma > + <$

 $M(\Psi\alpha, \beta)\Psi\theta, \gamma > + < M(\Psi\alpha, \beta)\theta, \Psi\gamma > ;$

 \overline{M}_3 if $\langle M(\alpha, \beta)\theta, \gamma \rangle = \langle M(\Psi\alpha, \Psi\beta)\Psi\theta, \Psi\gamma \rangle$.

The AH-structures belonging to the class W_i have a tensor R that fulfills the identity W_i . If AH-any subclass of H-structures is named $\cap W_i = 0$, where i is 1, 2, or 3,

In this paper, we will generalize these relationships, definitions and theories related to them for NK – Nearly Kahler manifold of M – projective curvature tensor. In 2018 Ali A. Shihab and Dhabia'a M. Ali where studied classes of almost Hermitian manifold[4].In the study also concentrates generalized conharmonic curvature tensor of Vaisman -Gray manifold.

Preliminaries

Assume that M is a smooth manifold of dimension-2n; $C^{\infty}(M)$ is algebra of smooth functions on M; $\alpha(M)$ the module of smooth vector fields on M;and that $g = \langle .,. \rangle - R$ iemannian metrics; $\tilde{N} - R$ iemannian connection of the metrics g on M; d - the operator of exterior differentiation. Additional all manifold, Tensor fields, and other objects are assumed to be of class C^{∞} . So Almost Hermition (is shorter,AH) structure on a manifold M the pair (Ψ , g), where Ψ -almost complex structure ($\Psi^2 = id$) on M, $g = \langle .,. \rangle - (pseudo)$ Riemannian metric on M. In this case $\langle \Psi \alpha, \Psi \beta \rangle = \langle \alpha, \beta \rangle$; $\alpha, \beta \in \alpha(M)$.

Definition 1 [5]

The manifold (M, Ψ, g) denotes to as manifold of a class: 1) \overline{M}_1 if $\langle M(\alpha, \beta)\theta, \gamma \rangle = \langle M(\alpha, \beta)\Psi\theta, \Psi\gamma \rangle$; 2) \overline{M}_2 if $\langle M(\alpha, \beta)\theta, \gamma \rangle = \langle M(\Psi\alpha, \Psi\beta)\theta, \gamma \rangle + \langle M(\Psi\alpha, \beta)\Psi\theta, \gamma \rangle + \langle M(\Psi\alpha, \beta)\theta, \Psi\gamma \rangle$; 3) \overline{M}_3 if $\langle M(\alpha, \beta)\theta, \gamma \rangle = \langle M(\Psi\alpha, \Psi\beta)\Psi\theta, \Psi\gamma \rangle$. **Note 2** NK – manifold of class

 $M_0 = M_3 = M_5 = M_6$

Which are also manifold of a class \overline{M}_3 .

It is most clear when the curvature identities are expressed in terms of a spectrum. Generalized projective curvature tensor.

Theorem 3

Assume that $Z = (\Psi, g = \langle ., . \rangle)$ is NK ("Nearly Kahler") structure. Consequently, the following propositions are equivalent :

(1) Z- Structure of a class \overline{M}_3 ;

(2) $M_{(0)} = 0$; and

(3)The identities $M^{a}_{bcd=0}$ on space of the adjoint G-structure are acceptable.

proof.

Assume that Z – structure of a class \overline{M}_3 . Clearly, it is equal to identity $M(\alpha, \beta)\theta + \Psi M(\Psi \alpha, \Psi \beta)\Psi \theta = 0$; $\alpha, \beta, \theta \in \alpha(M)$. By definition of a spectrum tensor $M(\alpha, \beta)\theta = M_0(\alpha, \beta)\theta +$ $M_1(\alpha,\beta)\theta + M_2(\alpha,\beta)\theta + M_3(\alpha,\beta)\theta + M_4(\alpha,\beta)\theta + M_5(\alpha,\beta)\theta + M_5($ $M_6(\alpha, \beta)\theta + M_7(\alpha, \beta)\theta;\alpha, \beta, \theta \alpha(M).$ $\Psi \circ M(\Psi \alpha, \Psi \beta) \Psi \theta = \Psi \circ M_0(\Psi \alpha, \Psi \beta) \Psi \theta + \Psi \circ M_1(\Psi \alpha, \Psi \beta) \Psi \theta +$ $\Psi \circ M_2(\Psi \alpha, \Psi \beta) \Psi \theta +$ $\Psi \circ M_3(\Psi \alpha, \Psi \beta) \Psi \theta + \Psi \circ M_4(\Psi \alpha, \Psi \beta) \Psi \theta + \Psi \circ M_5(\Psi \alpha, \Psi \beta) \Psi \theta +$ $\Psi \circ M_6(\Psi \alpha, \Psi \beta) \Psi \theta + \Psi \circ M_7(\Psi \alpha, \Psi \beta) \Psi \theta = M(\alpha, \beta) \theta =$ $M_0(\alpha,\beta)\theta - M_1(\alpha,\beta)\theta - M_2(\alpha,\beta)\theta - M_3(\alpha,\beta)\theta - M_4(\alpha,\beta)\theta M_5(\alpha, \beta)\theta - M_6(\alpha, \beta)\theta - M_7(\alpha, \beta)\theta;\alpha, \beta, \theta \alpha(M).$ Putting term by these identities, will be received: $\{M_0(\alpha,\beta)\theta + M_3(\alpha,\beta)\theta +$ $M(\alpha, \beta)\theta + \Psi M(\Psi \alpha, \Psi \beta)\Psi \theta =$ $M_5(\alpha, \beta)\theta + M_6(\alpha, \beta)\theta$. With means, the identity $M(\alpha, \beta)\theta + \Psi M(\Psi \alpha, \Psi \beta)\Psi \theta = 0$ is equivalent to that $M_0(\alpha, \beta)\theta + M_3(\alpha, \beta)\theta + M_5(\alpha, \beta)\theta + M_0(\alpha, \beta)\theta$

and this identity is equivalent to identities $M_0 = M_3 = M_5 = M_6 = 0$.

the established characteristics of the adjoint G-space structure's are equal to relations:

 $M^{a}_{bcd} = M^{a}_{b\widehat{c}\widehat{d}} = M^{a}_{\widehat{b}c\widehat{d}} = 0.$

By virtue of materiality tensor M received relations which are same to relations

 $M_{bcd}^a = 0$, i.e. identity $M_0(\alpha, \beta)\theta = 0$.

Theorem 4

Assume that $Z = (\Psi, g = \langle \cdot, \cdot \rangle)$ be NK ("Nearly Kahler") structure, Consequently, the following propositions are equivalent

(1) Z- Structure of a class \overline{M}_2 ;

(2) $M_0 = M_7 = 0$; and

(3) The identities $M_{bcd}^a = M_{\widehat{b}\widehat{c}\widehat{d}}^a = 0$ on space of the attached G-structure are acceptable.

Proof:

Assume that Z- structure of a class \overline{M}_2 . We shall duplicate identity \overline{M}_2 in with everyone in place, this identity will be computed using the notion of a spectrum tensor as follows: $M(\alpha, \beta)\theta = M_0(\alpha, \beta)\theta + M_1(\alpha, \beta)\theta + M_2(\alpha, \beta)\theta + M_3(\alpha, \beta)\theta +$ $M_4(\alpha,\beta)\theta + M_5(\alpha,\beta)\theta + M_6(\alpha,\beta)\theta + M_7(\alpha,\beta)\theta;$ $M(\Psi \alpha, \Psi \beta)\theta = M_0(\Psi \alpha, \Psi \beta)\theta$ $M_1(\Psi\alpha,\Psi\beta)\theta+$ + 1) $M_2(\Psi\alpha,\Psi\beta)\theta$ $M_3(\Psi\alpha,\Psi\beta)\theta + M_4(\Psi\alpha,\Psi\beta)\theta$ + + $M_5(\Psi\alpha,\Psi\beta)\theta + M_6(\Psi\alpha,\Psi\beta)\theta + M_7(\Psi\alpha,\Psi\beta)\theta$ = $-M_0(\alpha,\beta)\theta + M_1(\alpha,\beta)\theta + M_2(\alpha,\beta)\theta - M_3(\alpha,\beta)\theta - M_4(\alpha,\beta)\theta +$ $M_5(\alpha, \beta)\theta + M_6(\alpha, \beta)\theta - M_7(\alpha, \beta)\theta;$ 2) $M(\Psi\alpha, \beta)\Psi\theta = M_0(\Psi\alpha, \beta)\Psi\theta + M_1(\Psi\alpha, \beta)\Psi\theta + M_2(\Psi\alpha, \beta)\Psi\theta +$ $M_3(\Psi\alpha, \beta)\Psi\theta$ + M_4 ($\Psi\alpha$, β) $\Psi\theta$ + M_5 ($\Psi\alpha$, β) $\Psi\theta$ + $M_6(\Psi\alpha, \beta)\Psi\theta + M_7(\Psi\alpha, \beta)\Psi\theta = -M_0(\alpha, \beta)\theta M_1(\alpha, \beta)\theta + M_2(\alpha, \beta)\theta + M_3(\alpha, \beta)\theta + M_4(\alpha, \beta)\theta + M_5(\alpha, \beta)\theta M_6(\alpha,\beta)\theta - M_7(\alpha,\beta)\theta$. $3)\Psi M(\Psi \alpha, \beta)\theta = \Psi M_0(\Psi \alpha, \beta)\theta + \Psi M_1(\Psi \alpha, \beta)\theta + \Psi M_2(\Psi \alpha, \beta)\theta +$ $+\Psi M_4 (\Psi \alpha, \beta) \theta +$ $\Psi M_3(\Psi \alpha, \beta) \theta$ $\Psi M_{5}(\Psi \alpha, \beta)\theta +$ $\Psi M_6(\Psi \alpha, \beta) \theta +$ $\Psi M_7(\Psi \alpha, \beta) \theta$;= $-M_0(\alpha,\beta)\theta$ $M_3(\alpha, \beta)\theta$ – $M_4 (\alpha, \beta)\theta M_1(\alpha,\beta)\theta + M_2(\alpha,\beta)\theta +$ $M_5(\alpha, \beta)\theta + M_6(\alpha, \beta)\theta + M_7(\alpha, \beta)\theta.$

Substituting these breakdown in the prior equality, we will obtain:

$$\begin{split} \mathsf{M}(\alpha, \beta)\theta &- \mathsf{M}(\Psi\alpha, \Psi\beta)\theta - \mathsf{M}(\Psi\alpha, \beta)\Psi\theta + \Psi\mathsf{M}(\Psi\alpha, \beta)\theta \\ &+ \Psi\mathsf{M}(\Psi\alpha, \beta)\theta = \end{split}$$

 $2\{ M_0(\alpha,\beta)\theta + M_3(\alpha,\beta)\theta + M_6(\alpha,\beta)\theta + M_7(\alpha,\beta)\theta \}$ This identity is equivalent to that

 $M_0(\alpha, \beta)\theta = M_3(\alpha, \beta)\theta = M_5(\alpha, \beta)\theta = M_7(\alpha, \beta)\theta = 0.$

Additionally, these identities on the space of the adjoint G-structure are comparable to identities.

 $M_{bcd}^{a} = M_{b\widehat{c}\widehat{d}}^{a} = M_{\widehat{b}c\widehat{d}}^{a} = M_{\widehat{b}c\widehat{d}}^{a} = M_{\widehat{b}\widehat{c}\widehat{d}}^{a}$. The received relations are identical to these by reason of the materiality tensor M: $M_{bcd}^{a} = M_{\widehat{b}\widehat{c}\widehat{d}}^{a}$, i.e. to identities $M_{0}(\alpha,\beta)\theta = M_{0}(\alpha,\beta)\theta$. Back, let for NK- manifold identities $M_0(\alpha, \beta)\theta = M_7(\alpha, \beta)\theta = 0$ are executed.

Then we have:

 $M(\alpha, \beta)\theta - M(\alpha, \Psi\beta)\Psi\theta - M(\Psi\alpha, \beta)\Psi\theta - M(\Psi\alpha, \beta)\Psi\theta = 0$ i.e.

 $M(\alpha, \beta)\theta = M(\Psi\alpha, \beta)\Psi\theta = M(\Psi\alpha, \Psi\beta)\theta = M(\alpha, \Psi\beta)\theta$

In the received identity instead of $M(\alpha, \Psi \beta)\theta$ we shall put the value $\beta \rightarrow \Psi \beta$ and $\alpha \rightarrow \Psi \alpha$, i.e $M(\alpha, \Psi \beta)\Psi \theta = -\Psi M(\Psi \alpha, \beta)\theta$.

Then

 $M(\alpha, \beta)\theta = M(\Psi\alpha, \Psi\beta)\theta + M(\Psi\alpha, \beta)\Psi\theta - \Psi M(\Psi\alpha, \Psi\beta)\theta$ i.e.

As a result, the manifold fulfills the identity. \overline{M}_2 .

It is also proven by the next theorem.

Theorem 5

Assume that $Z = (\Psi, g = \langle ., . \rangle)$ be NK ("Nearly Kahler ")structure. Consequently, the following propositions are equivalent to:

(1) θ –structure of a class \overline{M}_1 ;

(2) $M_0 = M_4 = M_7 = 0;$

(3) The identities $M_{bcd}^a = M_{\widehat{b}cd}^a = M_{\widehat{b}\widehat{c}\widehat{d}}^a$ on space of the attached G-structure are acceptable.

Proof :

Assume that Z is a structure of a class \overline{M}_1 . Clearly, it is comparable to identity

< M(α , B) θ , γ > = < M(α , B) $\Psi\theta$, $\Psi\gamma$ >

and We get $M(\alpha, \beta)\theta + \Psi M(\alpha, \beta)\Psi\theta = 0$; $\alpha, \beta, \theta \in \alpha(M)$.

By definition of a spectrum tensor

1) $M(\alpha, \beta)\theta = M_0(\alpha, \beta)\theta + M_1(\alpha, \beta)\theta + M_2(\alpha, \beta)\theta +$

$$\begin{split} &M_3(\alpha, \beta)\theta + M_4(\alpha, \beta)\theta + M_5(\alpha, \beta)\theta + M_6(\alpha, \beta)\theta + M_7(\alpha, \beta)\theta ; \\ &\alpha, \beta, \theta \in \alpha(M). \end{split}$$

2) $\Psi_{o}M(\alpha, \beta)\Psi\theta = \Psi_{o}M_{0}(\alpha, \beta)\Psi\theta + \Psi_{o}M_{1}(\alpha, \beta)\Psi\theta + \Psi_{o}M_{2}(\alpha, \beta)\Psi\theta + \Psi_{o}M_{3}(\alpha, \beta)\Psi\theta + \Psi_{o}M_{4}(\alpha, \beta)\Psi\theta + \Psi_{o}M_{5}(\alpha, \beta)\Psi\theta + \Psi_{o}M_{6}(\alpha, \beta)\Psi\theta + \Psi_{o}M_{7}(\alpha, \beta)\Psi\theta ; = -M_{0}(\alpha, \beta)\theta -$

$$\begin{split} &M_1(\alpha, \beta)\theta - M_2(\alpha, \beta)\theta - M_3(\alpha, \beta)\theta + \\ &M_4(\alpha, \beta)\theta - M_5(\alpha, \beta)\theta - M_6(\alpha, \beta)\theta + M_7(\alpha, \beta)\theta ; \ \alpha, \beta, \theta \in \\ &\alpha(M). \text{Putting (1) and (2) in} \end{split}$$

 $M(\alpha, \beta)\theta + \Psi M(\alpha, \beta)\Psi\theta$ means, this identity is equivalent to that

 $M_{(0)}(\alpha,\beta)\theta + M_4(\alpha,\beta)\theta M_0(\alpha,\beta)\theta = 0.$

And this identity is equivalent to identities $M_{(0)} = M_4 = M_7 = 0$.

the established identities in space of the adjoint G-structure are equal to relations:

$$M^{a}_{bcd} = M^{a}_{\widehat{b}cd} = M^{a}_{\widehat{b}\widehat{c}\widehat{d}} = 0 .$$

Corollary 6

Let $Z = (\Psi, g = \langle ., . \rangle)$ be NK ("Nearly Kahler") structure. Afterward, the inclusions listed below of classes $\overline{M}_1 \subset \overline{M}_2 \subset \overline{M}_3$ are acceptable.

proof:

Let Z - structure of a class $\overline{(W)}_1$. Obviously, it is equivalent to $(W)_0 = (W)_4 = (W)_7 = 0$, By theorem 5.

So (By theorem 4) $(W)_0 = (W)_7 = 0$, is equivalent to class $\overline{(W)}_2$.

Then $\overline{(W)}_1 \subset \overline{(W)}_2$.

Also the class $\overline{(W)}_3$ is equivalent to $(W)_0 = 0$, that is clear from theorem 5.

Thus $\overline{(W)}_1 \subset \overline{(W)}_2 \subset \overline{(W)}_3$.

Conclusion

Find new classes $\overline{M}_0(N.K)$, $\overline{M}_1(N.K)$ and $\overline{M}_3(N.K)$ and proved the structure. $\overline{M}_3(N.K)$ is $\overline{M}_7(N.K) = 0$, and on space of the adjoint G-structure identities $W(N.K)^a_{\hat{b}\hat{c}\hat{d}} = 0$ are fair.

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Safeguarding Sensitive Data: Navigating the Landscape of DataProtection in the Digital Age

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Introduction

In our interconnected world today, safeguarding personal and sensitive data has

become a pressing issue. With the rise of online services and the constant threat of cyber-attacks, it's more important than ever to ensure robust data protection measures. This introduction aims to give a thorough overview of why data protection matters and what this thesis will explore.

The advent of digital data has changed society in an amazing way by creating new possibilities for innovation and communication. But it also raises new challenges, such as privacy and security risks associated with sensitive information. For instance, the birth of social media platforms has led to concerns on data privacy that are evident in controversies like Facebook's unauthorized sharing of user data

The objectives

This thesis is set out to look into current trends on data protection strategies today while identifying typical problems encountered by organizations in their efforts to safeguard data. To achieve that goal, it will delve into theoretical underpinnings, regulatory frameworks and technological advancements in relation to data protection. For example, it looks at how encryption technologies can be used by organization while transmitting critical information via interne. (1), (2)

The structure of the study

The purpose of this thesis is to study data protection in a comprehensive manner. It commences with the introduction to the subject, followed by an explanation on how data protection has upgraded so far. The literature review deals with theoretical frameworks, regulatory landscapes and technological evolutions. The methodology section presents a research approach as well as data collection methods. Subsequent sections explore data protection strategies, challenges and solutions with real-world case studies. (3)

Theoretical Foundation of Data Protection

Confidentiality, integrity and availability are some of the basic principles underlying modern data security practices. Confidentiality makes sure that only authorized users can access private information, while when it comes to integrity it ensures consistency and accuracy of information held in databases through proper update and maintenance. Furthermore, availability guarantees uninterrupted accessibility to needed information at any time. Understanding these principles is crucial for designing effective data protection strategies. (4),(5)

Data Protection Framework and Regulations

Regulatory frameworks like the General Data Protection Regulation (GDPR), California Consumer Privacy Act (CCPA), and Health Insurance Portability and Accountability Act (HIPAA) establish standards for data protection and privacy. GDPR, for instance, emphasizes consent, transparency, and data minimization, while CCPA grants consumers rights over their personal information. These regulations shape organizational practices and have influence on global data protection efforts. (6),(7)

Impact of Data Breaches and Privacy Violations

Data breaches and privacy violations have profound implications for individuals, organizations, and society at large. Beyond financial losses and reputational damage, breaches erode trust in digital services and undermine confidence in data protection measures. Notable incidents like the Equifax breach highlight the urgency of bolstering cybersecurity defenses and implementing robust data protection strategies.(6),(7)

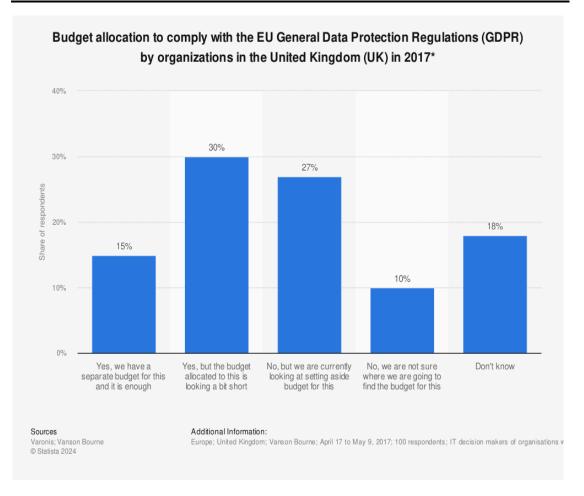
Technological Advancements in Data Protection

encryption, Advancements in anonymization, access controls, and threat detection technologies have revolutionized data protection capabilities. Encryption protocols safeguard data in transit and at rest, while access controls restrict unauthorized access. Technologies like machine learning and artificial intelligence enhance threat detection and response, enabling organizations to proactively mitigate risks posed by cyber threats and data breaches. This comprehensive literature review multifaceted nature of data protection, underscores the encompassing theoretical principles, regulatory frameworks, implications of breaches, and real-world technological advancements. By synthesizing insights from various sources, this research lays the groundwork for a deeper understanding of data protection challenges and opportunities in the digital age. (8)

Data Protection Strategies Legal Measures

Legal measures encompass compliance with regulations such as GDPR, CCPA,

and HIPAA, as well as contractual agreements and intellectual property protections. Organizations must ensure they adhere to applicable laws and standards to avoid legal repercussions and protect the rights of individuals.(8)



Organizational Practices

Organizational practices involve establishing clear data handling policies, conducting regular security audits, and providing ongoing training to employees on data protection best practices. By fostering a culture of security awareness and accountability, organizations can mitigate internal threats and bolster their overall security posture. (9)

Technical Solutions

Of course, we can't forget about the tech side of things. From strong encryption

to fancy biometric authentication, there are plenty of tools out there to help us keep data secure. Intrusion detection systems and other high-tech solutions help us spot trouble before it starts, so we can keep our data safe from prying eyes and sticky fingers.

Data Governance and Risk Management

When it comes down to it, data protection is all about managing risk and making sure everyone plays by the rules. Data governance frameworks help keep us honest about how we handle data, while risk management practices help us spot and squash potential threats. By staying on top of things and being proactive about security, we can keep our data safe and our reputations intact. (10)

Challenges and Solutions Legal Challenges

But it's not all smooth sailing. Navigating the legal landscape can be tricky, especially when the rules keep changing. And if something does go wrong, the fallout can be pretty messy. That's why it's so important to stay up to date on the latest regulations and make sure we're always doing our best to keep data safe.(10)

Ethical Challenges

Ethical challenges encompass balancing the need for data privacy with the demand for data-driven innovation, addressing concerns about data exploitation and surveillance, and promoting ethical data practices within organizations. By upholding ethical standards and respecting individuals' rights to privacy, organizations can build trust and credibility with their customers and partners.(10),(11)

Technological Challenges

Technological challenges may include keeping pace with rapidly evolving cyber

threats, securing data across diverse platforms and devices, and ensuring interoperability of data protection technologies. By investing in innovative solutions and staying ahead of emerging threats, organizations can enhance their resilience to cyberattacks and data breaches. (12)

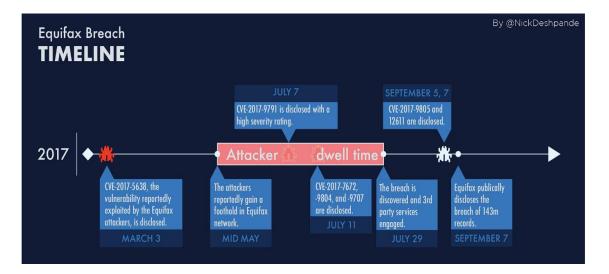
Proposed Solutions

Proposed solutions involve adopting a proactive approach to data protection, fostering a culture of accountability and transparency, and investing in innovative technologies such as artificial intelligence and blockchain to enhance data security. By embracing a holistic approach to data protection, organizations can effectively safeguard sensitive information and mitigate risks in an increasingly interconnected world.(12)

CASE STUDIES

Case Study 1: Equifax data breach 2017 – Lessons learned and impact on data protection

The Equifax data breach of 2017 stands as one of the largest and most consequential breaches in history, affecting over 147 million individuals. The breach occurred due to a vulnerability in Equifax's system that went unpatched, allowing hackers to gain access to sensitive personal information. This case underscores the importance of proactive security measures, regular system updates, and robust incident response plans in mitigating the risks of data breaches.



Case Study 2 : GDPR compliance in practice – challenges and strategies for implementation

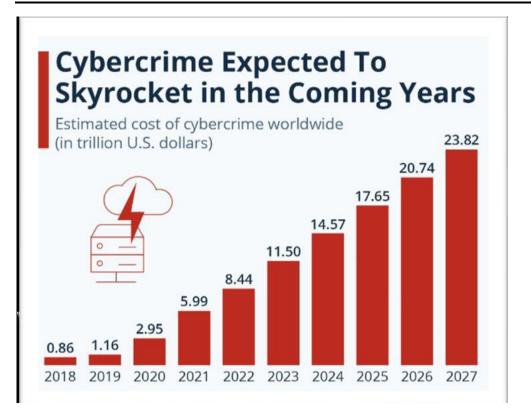
The implementation of the General Data Protection Regulation GDPR presented significant challenges for organizations in the whole world. Many struggled to adapt their data handling practices to comply with the stringent requirements of the regulation, leading to confusion and uncertainty. However, organizations that respected data protection, invested in compliance efforts, and embraced a culture of transparency were better positioned to navigate the complexities of GDPR and build trust with customers.

Case Study 3 : Healthcare Data breach – Ethical considerations and patient privacy

Healthcare organizations are entrusted with a lot of sensitive patient data, making them prime targets for cyber-attacks. A data breach in a healthcare setting can have very big consequences, jeopardizing patient privacy and undermining trust in the healthcare system. Ethical considerations surrounding patient privacy, consent, and data security are paramount in safeguarding sensitive healthcare information.

Conclusion

This study has provided a comprehensive examination of data protection strategies and challenges in the digital age, encompassing legal, organizational, technical, and ethical dimensions. By analyzing theoretical frameworks, regulatory landscapes, technological advancements, and real-world case studies, this research has identified key insights and proposed solutions for enhancing data protection practices.



Summary of Key Findings

Key findings from the literature review, case studies, and analysis underscore

the importance of proactive data protection measures, regulatory compliance, ethical considerations, and technological innovations in making sensitive information safe. Organizations must adopt a multi-faceted approach to data protection, encompassing legal measures, organizational practices, technical solutions, and robust governance frameworks.

Implications for Data Protection

The implications of this research highlight the critical need for organizations to prioritize data protection as a fundamental aspect of their operations. By implementing good data protection strategies, organizations can lower the risks, enhance trust with stakeholders, and safeguard the privacy and security of individuals' personal information. Additionally, the findings underscore the importance of ongoing education, collaboration, and innovation in addressing evolving threats and challenges in the digital landscape.

(12), (13)

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