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NAAC-'A' Grade Institute (CGPA: 3.21)
NIRF-2021 Rank : 197



KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE
Opp : Yerragattu Gutta, Hasanparthy (Mandal), WARANGAL - 506 015, Telangana, INDIA.
काकतीय प्रौद्योगिकी एवं विज्ञान संस्थान, वरंगल - ५०६ ०१५ तेलंगाना, भारत
కాకతీయ సాంకేతిక విజ్ఞాన శాస్త్ర విద్యాలయం, వరంగల్ - ౫౦౬ ౦౧౫ తెలంగాణ, భారతదేశము
Estd-1980
KITSW
(An Autonomous Institute under Kakatiya University, Warangal)
(Approved by AICTE, New Delhi; Recognised by UGC under 2(f) & 12(B); Sponsored by EKASILA EDUCATION SOCIETY)

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING(NETWORKS)
UG MAJOR PROJECT TITLE ALLOCATION & MAPPING

Programme: B.Tech.

Academic Year: 2024-25

Semester and Class: 7 CSM

S. No		Project Title	Mapped SDG	Supervisor
1	B21AI003 B21AI016 B21AI012 B21AI053 B21AI036	Phishing-Website-Detection-Using-Machine-Learning	SDG 9 – Industry, Innovation And Infrastructure, SDG 16 – Peace, Justice And Strong Institutions, SDG 4 –Quality Education	Dr. B. Hanumanthu
2	B21AI031 B21AI015 B21AI023 B21AI063 B21AI062	Deep Learning For Community Detection In Social Networks	SDG 9 – Industry, Innovation And Infrastructure, SDG 11 – Sustainable Cities And Communities, SDG 16 – Peace, Justice And Strong Institutions	Dr. S. Raghu
3	B21AI006 B21AI025 B21AI049 B21AI054	Diabetes Detection Using Machine Learning Classification Methods	SDG-3 Good Health And Well-Being, SDG 4 – Quality Education, SDG 10 – Reduced Inequalities	Sri. V. Ramu
4	B21AI059 B21AI024 B21AI057 B21AI018	AI-Driven Financial Health Platform For Personalized Wealth Management	SDG 8 – Decent Work And Economic Growth SDG 9 – Industry, Innovation And Infrastructure, SDG 10 – Reduced	Prof. Narasimha Reddy Soora

S. No		Project Title	Mapped SDG	Supervisor
			Inequalities	
5	B21AI019 B21AI013 B21ai008 B21AI011	Chatgpt-Like Model For Quantitative Aptitude And Logical Reasoning	SDG 4 – Quality Education, SDG 9 – Industry, Innovation And Infrastructure	Dr. Jothi Prabha Appadurai
6	B21AI002 B21AI039 B21AI043 B21AI046	A Clinical Decision Support System For Heart Disease Prediction Using Deep Learning	SDG-3 Good Health And Well-Being, SDG 9 – Industry, Innovation And Infrastructure, SDG 10 – Reduced Inequalities	Ms. M. Hithasri
7	B21AI007 B21AI042 B22AI0681 B22AI0701	Feature Extraction And Classification Of Lung Disease Using Deep Learning Models	SDG-3 Good Health And Well-Being, SDG 9 – Industry, Innovation And Infrastructure	Sri. K. Shivakumar
8	B21AI020 B21AI028 B21AI040 B21AI009	Social Media Bot Detection With Deep Learning Methods	SDG 9 – Industry, Innovation And Infrastructure, SDG 16 – Peace, Justice And Strong Institutions	Sri. I. Sai Rama Krishna
9	B21AI051 B21AI030 B21AI050 B21AI058	Stroke Identification Using MI	SDG-3 Good Health And Well-Being, SDG 9 – Industry, Innovation And Infrastructure	Smt. D. Haritha
10	B21AI034 B21AI032 B21AI045 B21AI004	Machine Learning And Statistical Methods For Clustering Single-Cell Rna-Sequencing Data	SDG-3 - Good Health And Well-Being, SDG 9 – Industry, Innovation And Infrastructure	Sri. M. Rajesh

S. No		Project Title	Mapped SDG	Supervisor
11	B21AI001 B21AI047 B21AI033 B22AI0711	Credit Card Fraud Detection Using State-Of-The-Art Machine Learning And Deep Learning Algorithms	SDG 9 – Industry, Innovation And Infrastructure, SDG 16 – Peace, Justice And Strong Institutions	Dr. K.Vinay Kumar
12	B21AI052 B22AI0661 B22AI0691 B21AI021	Optimizing Brain Tumor Recognition With Ensemble Support Vector-Based Local Coati Algorithm And Cnn Feature Extraction	SDG 3- Good Health And Well-Being, SDG 9 – Industry, Innovation And Infrastructure	Sri. S.Nagaraju
13	B21AI048 B21AI029 B22AI0671 B21AI060	Autonomous Uav Visual Navigation Using An Improved Deep Reinforcement Learning	SDG 9 – Industry, Innovation And Infrastructure, SDG 11 – Sustainable Cities And Communities	Smt. V. Prashanthi
14	B21AI055 B21AI044 B21AI041 B21AI056	Image Classification Based On Light Convolutional Neural Networks Using Pulse Couple Neural Networks	SDG 9 – Industry, Innovation And Infrastructure, SDG 4 – Quality Education	Dr. M. Sujatha
15	B21AI022 B21AI005 B21AI010 B21AI061	Android Malware Detection By Correlated Real Permission Couples Using Fp Growth Algorithm And Neural Networks	SDG 9 – Industry, Innovation And Infrastructure, SDG 16 – Peace, Justice And Strong Institutions	Smt. E. Rajitha
16	B21AI027 B21AI037 B21AI064 B21AI065	Etsnet: A Deep Neural Network For Eeg-Based Temporal Spatial Pattern Recognition In Psychiatric Disorder And Emotional Distress Classification	SDG-3 - Good Health And Well-Being, SDG 9 – Industry, Innovation And Infrastructure	Sri. B. Ramji
17	B21AI035 B21AI026 B21AI038 B21AI017	A Novel Multi-Layer Multi-Spiking Neural Network For Eeg Signal Classification Using Mini Batch Sgd	SDG-3 Good Health And Well-Being, SDG 9 – Industry, Innovation And Infrastructure	Smt. R. Swetha

SDG Mapping with Justifications for UG Major Projects (AY 2024-25)

1	Phishing Website Detection using Machine Learning Justifications:	SDG 9 - Industry, Innovation and Infrastructure: The project strengthens digital infrastructure by applying machine learning techniques to identify and prevent phishing attacks, contributing to safer and more resilient online systems. SDG 16 - Peace, Justice and Strong Institutions: By detecting phishing websites, the system helps reduce cybercrime, online fraud, and misuse of digital platforms, fostering trust and security in digital institutions. SDG 4 - Quality Education: The project enhances student skills in cybersecurity and applied machine learning, promoting practical and research-oriented technical education.
2	Deep Learning for Community Detection in Social Networks Justifications:	SDG 9 - Industry, Innovation and Infrastructure: Applying deep learning to social network analysis promotes innovation in large-scale data analytics and intelligent network systems. SDG 11 - Sustainable Cities and Communities: Community detection helps understand social structures and interactions, supporting smarter digital communities and informed decision-making. SDG 16 - Peace, Justice and Strong Institutions: Identifying communities and interaction patterns helps reduce misinformation and supports safer, more transparent online platforms.
3	Diabetes Detection Using Machine Learning Justifications:	SDG 3 - Good Health and Well-being: Early detection of diabetes using machine learning enables timely medical intervention, improving patient outcomes and quality of life. SDG 4 - Quality Education: The project provides hands-on experience in healthcare analytics and machine learning, strengthening applied learning. SDG 10 - Reduced Inequalities: Low-cost diagnostic support systems help improve access to healthcare services in underserved and rural regions.
4	AI-Driven Financial Health Platform for Personalized Wealth Management Justifications:	SDG 8 - Decent Work and Economic Growth: Personalized financial insights support informed economic decision-making and long-term financial stability. SDG 9 - Industry, Innovation and Infrastructure: The platform promotes innovation in fintech by leveraging AI-driven analytics. SDG 10 - Reduced Inequalities: Accessible financial advisory tools help bridge gaps in financial literacy and wealth

		management.
5	ChatGPT-like Model for Quantitative Aptitude and Logical Reasoning Justifications:	SDG 4 - Quality Education: The system supports personalized learning by assisting students in improving problem-solving and reasoning skills. SDG 9 - Industry, Innovation and Infrastructure: Developing conversational AI models contributes to innovation in intelligent educational technologies.
6	Heart Disease Prediction Using Deep Learning Justifications:	SDG 3 - Good Health and Well-being: The project aids early diagnosis of heart disease, reducing mortality rates through timely medical intervention. SDG 9 - Industry, Innovation and Infrastructure: Deep learning-based clinical decision systems enhance modern healthcare infrastructure. SDG 10 - Reduced Inequalities: Automated prediction systems improve access to healthcare diagnostics for economically weaker populations.
7	Feature Extraction and Classification of Lung Disease using Deep Learning Models Justifications:	SDG 3 - Good Health and Well-being: The project focuses on early and accurate detection of lung diseases using deep learning-based feature extraction and classification. Early diagnosis supports timely treatment, reduces disease severity, and improves patient survival and quality of life. SDG 9 - Industry, Innovation and Infrastructure: Applying deep learning to medical imaging promotes innovation in AI-driven diagnostic systems. The project contributes to the development of intelligent healthcare technologies and strengthens modern medical infrastructure. SDG 4 - Quality Education: The project enhances student knowledge in medical image analysis, deep learning, and healthcare analytics. It supports interdisciplinary, research-oriented technical education. SDG 10 - Reduced Inequalities: Automated lung disease detection systems reduce dependence on expensive diagnostic tools and specialist expertise, improving access to quality healthcare in rural and resource-limited regions.
8	Social Media Bot Detection with Deep Learning Methods Justifications:	SDG 9 - Industry, Innovation and Infrastructure: The project strengthens digital communication platforms by applying deep learning techniques to detect automated and malicious social media bots. It supports innovation in secure and reliable digital infrastructure.

		SDG 16 – Peace, Justice and Strong Institutions: By identifying bots that spread misinformation, spam, and malicious content, the system promotes safer online environments, transparency, and trust in digital platforms and institutions. SDG 4 – Quality Education: The project provides hands-on experience in deep learning, data mining, and cybersecurity. It enhances analytical thinking and real-world problem-solving skills in social media analytics. SDG 11 – Sustainable Cities and Communities: Safe and trustworthy social media platforms support healthy digital communities by encouraging responsible online interactions and reducing cyber threats.
9	Innovations in Stroke Identification using Machine Learning Justifications:	SDG 3 – Good Health and Well-being: The project enables early identification of stroke through machine learning-based analysis of medical data and neuro images. Early detection significantly improves treatment outcomes and reduces mortality and long-term disability. SDG 9 – Industry, Innovation and Infrastructure: The use of machine learning for stroke diagnosis promotes innovation in intelligent medical decision-support systems and strengthens digital healthcare infrastructure. SDG 4 – Quality Education: The project enhances student learning in healthcare analytics, machine learning, and medical image processing. It supports applied and research-oriented education in AI-based healthcare solutions. SDG 10 – Reduced Inequalities: Automated stroke detection systems can provide low-cost diagnostic support, improving access to emergency healthcare services in underserved and rural areas.
10	Machine Learning for Clustering Single-cell RNA Sequencing Data Justifications:	SDG 3 – Good Health and Well-being: The project supports biomedical research and precision medicine by analyzing single-cell RNA sequencing data to identify cellular patterns and disease-related variations, contributing to improved disease understanding and treatment strategies. SDG 9 – Industry, Innovation and Infrastructure: Applying

		machine learning techniques to high-dimensional genomic data promotes innovation in bioinformatics and computational biology. The project strengthens research-driven healthcare and biotechnology infrastructure. SDG 4 - Quality Education: The project provides interdisciplinary exposure to machine learning, genomics, and data analytics. It enhances advanced research skills and supports high-quality education in emerging biomedical domains. SDG 10 - Reduced Inequalities: Data-driven biomedical research supports the development of more accurate and cost-effective diagnostic and therapeutic approaches, helping reduce disparities in access to advanced healthcare solutions.
11	Credit Card Fraud Detection Using State-Of-The-Art Machine Learning And Deep Learning Algorithms Justifications:	SDG 9 - Industry, Innovation and Infrastructure:The project strengthens digital financial infrastructure by applying advanced machine learning and deep learning algorithms to detect fraudulent credit card transactions. Such intelligent fraud detection systems promote innovation in secure financial technologies and enhance the reliability of online banking and payment platforms. SDG 16 - Peace, Justice and Strong Institutions: By preventing financial fraud and cybercrime, the system contributes to safer digital transactions and builds trust in financial institutions. Effective fraud detection mechanisms help protect users from economic exploitation and support transparent, secure financial systems. SDG 10 - Reduced Inequalities: Automated fraud detection systems safeguard vulnerable users who may lack financial literacy or access to immediate banking support. This ensures equitable protection for all users and reduces the disproportionate impact of financial fraud on economically weaker sections.
12	Optimizing Brain Tumor Recognition With Ensemble Support Vector-Based Local Coati Algorithm And CNN Feature Extraction	SDG 3 - Good Health and Well-being: The project focuses on accurate and early detection of brain-tumors using advanced machine learning and deep learning techniques. Improved diagnostic accuracy supports timely medical intervention, better treatment planning, and enhanced patient survival rates. SDG 9 - Industry, Innovation and Infrastructure: By

		integrating ensemble support vector methods with CNN-based feature extraction, the project promotes innovation in medical imaging and AI-driven healthcare systems. It contributes to the development of intelligent diagnostic tools and strengthens modern healthcare infrastructure. SDG 4 - Quality Education: The project provides students with interdisciplinary exposure to machine learning, deep learning, and medical image analysis. It enhances research skills, problem-based learning, and practical understanding of AI applications in healthcare. SDG 10 - Reduced Inequalities: Automated brain-tumor detection systems can reduce dependence on costly diagnostic equipment and specialist expertise, making advanced healthcare diagnostics more accessible to patients in rural and resource-constrained regions.
13	Autonomous Uav Visual Navigation Using An Improved Deep Reinforcement Learning	SDG 9 - Industry, Innovation and Infrastructure: The project advances innovation in autonomous systems by applying deep reinforcement learning for UAV navigation. It supports the development of intelligent robotics, autonomous transportation, and next-generation aerial systems. SDG 11 - Sustainable Cities and Communities: Autonomous UAVs can be effectively used in smart city applications such as traffic monitoring, surveillance, infrastructure inspection, and disaster management. The project contributes to safer, smarter, and more sustainable urban environments. SDG 13 - Climate Action: UAV-based autonomous navigation enables efficient environmental monitoring, disaster assessment, and climate observation. Such applications support climate-related data collection and timely response to natural disasters, contributing to climate resilience and mitigation efforts.
14	Image Classification Based On Light Convolutional Neural Networks Using Pulse Couple Neural Networks	SDG 9 - Industry, Innovation and Infrastructure: The project promotes innovation in artificial intelligence by developing lightweight and efficient convolutional neural network architectures combined with pulse coupled neural networks. Such optimized models support deployment in real-time and resource-constrained environments, strengthening intelligent digital infrastructure. SDG 4 - Quality Education: This project enhances student

		understanding of advanced image processing, deep learning architectures, and bio-inspired neural models. It supports experiential learning and research-oriented education in emerging areas of artificial intelligence. SDG 12 - Responsible Consumption and Production: Lightweight neural network models reduce computational complexity, energy consumption, and hardware dependency. This promotes responsible use of computing resources and sustainable AI system development.
15	Android Malware Detection By Correlated Real Permission Couples Using Fp Growth Algorithm And Neural Networks	SDG 9 - Industry, Innovation and Infrastructure: The project strengthens mobile security infrastructure by applying data mining and neural network techniques to detect malicious Android applications. It supports innovation in cybersecurity and enhances the safety of mobile computing ecosystems. SDG 16 - Peace, Justice and Strong Institutions: By identifying malware and preventing unauthorized access to user data, the system contributes to safer digital environments and protects individuals from cyber threats, fraud, and privacy violations. SDG 4 - Quality Education: The project provides practical exposure to data mining algorithms, machine learning, and cybersecurity concepts. It enhances analytical thinking and real-world problem-solving skills in secure software development. SDG 10 - Reduced Inequalities: Effective and low-cost malware detection solutions help protect users who may lack access to advanced security tools, ensuring equitable digital safety for all sections of society.
16	Etsnet: A Deep Neural Network For Eeg-Based Temporal Spatial Pattern Recognition In Psychiatric Disorder And Emotional Distress Classification	SDG 3 - Good Health and Well-being: The project focuses on early identification of psychiatric disorders and emotional distress through EEG signal analysis using deep neural networks. Early detection supports timely intervention, improved mental healthcare, and enhanced overall well-being. SDG 9 - Industry, Innovation and Infrastructure: Developing ETSNet for temporal-spatial EEG analysis promotes innovation in biomedical signal processing and intelligent healthcare systems. The project contributes to advanced clinical decision-support tools and modern healthcare infrastructure. SDG 4 - Quality Education: This project provides

		interdisciplinary learning opportunities in neuroscience, deep learning, and signal processing. It strengthens research skills and promotes advanced technical education in healthcare-oriented AI applications. SDG 10 – Reduced Inequalities: Automated EEG-based mental health assessment systems reduce dependence on continuous expert supervision and expensive clinical setups, making mental healthcare more accessible to underserved and rural populations.
17	EEG-based Psychiatric Disorder and Emotional Distress Classification Justifications:	SDG 3 – Good Health and Well-being: The project focuses on identifying psychiatric disorders and emotional distress through EEG signal analysis. Early and accurate detection supports timely clinical intervention, improves mental health management, and enhances overall well-being. SDG 9 – Industry, Innovation and Infrastructure: Applying machine learning and deep learning techniques to EEG data promotes innovation in biomedical signal processing and intelligent healthcare systems. The project contributes to the development of automated mental health diagnostic tools and modern healthcare infrastructure. SDG 4 – Quality Education: The project provides interdisciplinary exposure to neuroscience, signal processing, and artificial intelligence. It enhances research-oriented learning and practical skills in healthcare-focused AI applications. SDG 10 – Reduced Inequalities: Automated EEG-based diagnostic systems can reduce dependence on continuous specialist supervision and expensive clinical resources, improving access to mental healthcare in rural and underserved communities.
18	Multi-layer Spiking Neural Network for EEG Signal Classification Justifications:	SDG 3 – Good Health and Well-being: The project improves classification of EEG signals related to neurological and mental health conditions. Accurate EEG analysis supports early diagnosis, better treatment planning, and improved patient outcomes. SDG 9 – Industry, Innovation and Infrastructure: Using multi-layer spiking neural networks promotes innovation in neuromorphic computing and advanced neural modeling. The project contributes to next-generation intelligent systems for

		biomedical signal analysis. SDG 4 - Quality Education: The project enhances student understanding of biologically inspired neural networks, signal processing, and advanced machine learning concepts. It supports research-driven and experiential technical education. SDG 10 - Reduced Inequalities: Efficient and automated EEG classification systems help make neurological diagnostics more affordable and accessible, reducing disparities in healthcare access for economically weaker populations.
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కాకతీయ సాంకేతిక విజ్ఞాన శాస్త్ర విద్యాలయం, వరంగల్ - 506 015 తెలంగాణ, భారతదేశము

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (AI&ML) UG MAJOR PROJECT TITLE ALLOCATION

Programme: B.Tech.

Academic Year: 2023-24

Semester and Class: 7 CSM

SDG- Mapping with Major Projects

Academic Year: CAY-2: 2023-2024

Batc h No	Roll Number	Major Project Title	SDGs Addressed	Supervisor
1	B20AI039 B20AI042 B20AI027 B20AI044 B20AI050	Gene-Based Comparative brain cancer classification using multiple ML algorithms	SDG 3 – Good Health and Well-being, SDG 9 – Industry, Innovation and Infrastructure SDG 4 – Quality Education SDG 10 – Reduced Inequalities	Dr.V.Swathy
2	B20AI009 B20AI032 B20AI049 B21AI065L	Insightful Health Analysis: Predicting Diabetes with Logistic Regression for Enhanced Patient Care and Management	SDG 3 – Good Health and Well-being, SDG 9 – Industry, Innovation and Infrastructure SDG 4 – Quality Education SDG 10 – Reduced Inequalities	Dr. B. Hanumanthu

Batch No	Roll Number	Major Project Title	SDGs Addressed	Supervisor
3	B20AI013 B20AI046 B20AI055 B20AI006	Electric vehicle charge station session classification for optimized battery based on Machine Learning	SDG 7 – Affordable and Clean Energy SDG 9 – Industry, Innovation and Infrastructure SDG 11 – Sustainable Cities and Communities SDG 12 – Responsible Consumption and Production SDG 13 – Climate Action	Dr. V. Shankar
4	B20AI052 B20AI002 B20AI029 B20AI037	EEG based epileptic prediction using machine learning techniques	SDG 3 – Good Health and Well-being SDG 9 – Industry, Innovation and Infrastructure SDG 4 – Quality Education SDG 10 – Reduced Inequalities	Smt. R. Swetha
5	B20CN039 B20CN058 B20CN037 B20CN010	Food recommendation system for diabetes patients	SDG 3 – Good Health and Well-being SDG 4 – Quality Education SDG 10 – Reduced Inequalities SDG 12 – Responsible Consumption and Production	Dr. V. Shankar

Batch No	Roll Number	Major Project Title	SDGs Addressed	Supervisor
6	B20CN007 B20CN021 B20CN055 B20CN027	Predicting Genetic Disorder and Types of Disorder Using Chain Classifier Approach	SDG 3 – Good Health and Well-being SDG 9 – Industry, Innovation and Infrastructure SDG 4 – Quality Education SDG 10 – Reduced Inequalities	Dr. V. Swathy
7	B20CN054 B20CN003 B20CN030 B20CN034	Detecting spammers on social networks	SDG 9 – Industry, Innovation and Infrastructure SDG 16 – Peace, Justice and Strong Institutions SDG 4 – Quality Education SDG 10 – Reduced Inequalities SDG 11 – Sustainable Cities and Communities	Sri. I. Sai Rama Krishna
8	B20CN053 B20CN048 B20CN042 B20CN017	CNN driven self-supervised EEG analysis on emotions	SDG 3 – Good Health and Well-being SDG 9 – Industry, Innovation and Infrastructure SDG 4 – Quality Education SDG 10 – Reduced Inequalities	Smt. R. Swetha
9	B20IN046 B20IN031 B20IN059 B20IN053	Unlocking Business Growth: Leveraging K means Clustering for Targeted Customer Segmentation	SDG 8 – Decent Work and Economic Growth SDG 9 – Industry, Innovation and Infrastructure SDG 4 – Quality Education SDG 10 – Reduced Inequalities SDG 12 – Responsible Consumption and Production	Dr. B. Hanumanthu

Batch No	Roll Number	Major Project Title	SDGs Addressed	Supervisor
10	B20IN007 B20IN041 B20IN020 B21IN061L	An Integrated approach to malware detection through community and social network patterns	SDG 9 – Industry, Innovation and Infrastructure SDG 16 – Peace, Justice and Strong Institutions SDG 4 – Quality Education SDG 10 – Reduced Inequalities SDG 11 – Sustainable Cities and Communities	Sri. I. Sai Rama Krishna
11	B20AI030 B20AI008 B21AI062L B21AI066L	Driver drowsiness detection using deep learning	SDG 3 – Good Health and Well-being SDG 11 – Sustainable Cities and Communities SDG 9 – Industry, Innovation and Infrastructure SDG 13 – Climate Action	Smt.T.Shruthi
12	B20AI023 B20AI041 B20AI054 B21AI064L	Traffic sign detection and recognition based on deep learning approach	SDG 9 – Industry, Innovation and Infrastructure SDG 11 – Sustainable Cities and Communities SDG 3 – Good Health and Well-being SDG 13 – Climate Action	Smt.T.Anusha

Justifications for SDG mapping for Each Major Project Title
Academic Year: CAY-2: 2023-2024

Major Project Tile- 1:	Gene-Based Comparative brain cancer classification using multiple ML algorithms
<u>Justifications</u>	SDG 3 – Good Health and Well-being: This project enables early and accurate classification of brain cancer using gene expression analysis and machine learning techniques. Such AI-assisted diagnostic systems help improve treatment planning, reduce diagnosis time, and enhance patient survival rates. SDG 4 – Quality Education: The project provides students with interdisciplinary exposure to machine learning, genomics, and healthcare analytics. It enhances research skills, promotes problem-based learning, and supports advanced technical education SDG 9 – Industry, Innovation and Infrastructure: By implementing and comparing multiple machine learning algorithms on genomic datasets, the project promotes innovation in healthcare technology and bioinformatics. It contributes to building intelligent medical decision-support systems and strengthens research-driven technological infrastructure. SDG 10 – Reduced Inequalities: Automated cancer classification systems can lower the dependency on expensive diagnostic procedures and specialized medical expertise. This helps in making advanced healthcare diagnostics more accessible to rural and economically weaker populations.
Major Project Tile- 2:	Insightful Health Analysis: Predicting Diabetes with Logistic Regression for Enhanced Patient Care and Management
<u>Justifications</u>	SDG 3 – Good Health and Well-being: The project focuses on early prediction of diabetes using logistic regression, enabling timely medical intervention and better disease management. Early detection helps reduce complications, improves patient care, and supports preventive healthcare practices. SDG 4 – Quality Education: The project strengthens student understanding of applied machine learning in real-world healthcare scenarios. It promotes analytical thinking and practical learning in data science and health informatics. SDG 9 – Industry, Innovation and Infrastructure:

	Applying machine learning techniques to healthcare data promotes innovation in digital health systems. The project contributes to the development of intelligent, data-driven medical decision-support tools that enhance healthcare infrastructure. SDG 10 – Reduced Inequalities: Predictive healthcare systems can provide low-cost, accessible diagnostic support, especially in rural and underserved areas. This helps reduce disparities in healthcare access and improves equity in medical services.
Major Project Tile- 3:	Electric vehicle charge station session classification for optimized battery based on Machine Learning
<u>Justifications</u>	SDG 7 – Affordable and Clean Energy: The project optimizes electric vehicle charging sessions using machine learning, improving energy efficiency and promoting the effective use of clean electrical energy in transportation systems. SDG 9 – Industry, Innovation and Infrastructure: Applying machine learning to EV charging infrastructure enhances innovation in smart transportation systems. The project supports the development of intelligent, data-driven charging stations and modern energy infrastructure. SDG 11 – Sustainable Cities and Communities: Efficient EV charging management reduces congestion at charging stations and supports the adoption of electric vehicles, contributing to cleaner, smarter, and more sustainable urban mobility. SDG 12 – Responsible Consumption and Production: Optimized battery charging helps prevent energy wastage and extends battery life, encouraging responsible use of resources and sustainable consumption patterns. SDG 13 – Climate Action: By supporting efficient EV usage and reducing reliance on fossil-fuel-based transportation, the project contributes to lowering greenhouse gas emissions and mitigating climate change impacts.
Major Project Tile- 4:	EEG based epileptic prediction using machine learning techniques
<u>Justifications</u>	SDG 3 – Good Health and Well-being: The project enables early prediction of epileptic

	seizures using EEG signal analysis and machine learning techniques. Early detection helps in timely medical intervention, improves patient safety, and enhances long-term health outcomes for individuals with epilepsy. SDG 9 – Industry, Innovation and Infrastructure: Applying machine learning to biomedical signal processing promotes innovation in healthcare technology. The project contributes to the development of intelligent, automated clinical decision-support systems for neurological disorder diagnosis. SDG 4 – Quality Education: This project provides students with hands-on experience in interdisciplinary areas such as machine learning, signal processing, and healthcare analytics. It enhances research-oriented learning and practical problem-solving skills. SDG 10 – Reduced Inequalities: Automated seizure prediction systems can reduce dependence on continuous expert monitoring and expensive diagnostic setups. This helps make neurological healthcare more accessible and affordable, especially in rural and underserved regions.
Major Project Tile- 5:	Food recommendation system for diabetes patients
<u>Justifications</u>	SDG 3 – Good Health and Well-being: Personalized dietary recommendations help in effective diabetes management by controlling blood sugar levels and preventing complications. The system supports preventive healthcare and improved quality of life for patients. SDG 4 – Quality Education: The project educates users about appropriate food choices and nutritional values. It also enhances student learning in applied machine learning, health analytics, and recommendation systems. SDG 10 – Reduced Inequalities: An affordable, technology-driven dietary guidance system improves access to nutritional advice for patients who may not have regular access to dietitians or healthcare professionals. SDG 12 – Responsible Consumption and Production: The system encourages responsible food consumption by reducing unhealthy eating habits and minimizing

	food wastage through planned and need-based dietary recommendations
Major Project Tile- 6:	Predicting Genetic Disorder and Types of Disorder Using Chain Classifier Approach
<u>Justifications</u>	SDG 3 – Good Health and Well-being: The project focuses on predicting genetic disorders and their types using machine learning techniques. Early identification of genetic conditions supports timely medical intervention, better treatment planning, and improved long-term health outcomes. SDG 9 – Industry, Innovation and Infrastructure: Using a chain classifier approach for multi-label genetic disorder prediction promotes innovation in healthcare analytics and bioinformatics. The project contributes to the development of intelligent diagnostic tools and advanced medical data processing infrastructure. SDG 4 – Quality Education: The project enhances student learning in advanced machine learning concepts such as multi-label classification and healthcare data analysis. It supports interdisciplinary education combining computer science and biomedical applications. SDG 10 – Reduced Inequalities: Automated genetic disorder prediction systems can reduce reliance on costly genetic testing and specialist availability. This helps improve access to advanced diagnostic support for economically weaker and remote populations.
Major Project Tile- 7:	Detecting spammers on social networks
<u>Justifications</u>	SDG 9 – Industry, Innovation and Infrastructure: The project applies machine learning techniques to detect spam and fake accounts on social networking platforms. This supports innovation in digital infrastructure and enhances the reliability and efficiency of online communication systems. SDG 16 – Peace, Justice and Strong Institutions: By identifying and reducing malicious activities such as spamming, misinformation, and fake profiles, the system contributes to safer digital environments, transparency, and trust in online platforms. SDG 4 – Quality Education: The project provides students with practical exposure to data mining, machine learning, and cybersecurity

	concepts. It enhances analytical skills and real-world problem-solving abilities in digital safety domains. SDG 10 – Reduced Inequalities: Spam detection systems help protect vulnerable users from online fraud, scams, and misinformation. This supports equitable and safer access to digital platforms for all sections of society. SDG 11 – Sustainable Cities and Communities: Safe and reliable social networks strengthen digital communities by promoting responsible online interaction, reducing cyber threats, and supporting sustainable virtual social spaces.
Major Project Tile- 8:	CNN driven self-supervised EEG analysis on emotions
<u>Justifications</u>	SDG 3 – Good Health and Well-being: The project focuses on analyzing human emotions using EEG signals and deep learning techniques. Emotion recognition plays a crucial role in mental health monitoring, stress detection, and early identification of psychological disorders, thereby supporting overall well-being. SDG 9 – Industry, Innovation and Infrastructure: Using CNNs and self-supervised learning for EEG-based emotion analysis promotes innovation in brain-computer interfaces and affective computing. The project contributes to the development of intelligent healthcare and human-centered AI systems. SDG 4 – Quality Education: This project enhances student learning in advanced deep learning, signal processing, and neuroscience applications. It supports interdisciplinary education and research-driven skill development. SDG 10 – Reduced Inequalities: Automated emotion analysis systems can support affordable mental health assessment tools, reducing dependence on continuous clinical supervision and improving accessibility for underserved populations.
Major Project Tile- 9:	Unlocking Business Growth: Leveraging K means Clustering for Targeted Customer Segmentation
<u>Justifications</u>	SDG 8 – Decent Work and Economic Growth: The project helps businesses understand customer

	behavior through data-driven segmentation, enabling targeted marketing strategies, improved customer satisfaction, and sustainable business growth. SDG 9 – Industry, Innovation and Infrastructure: Applying K-means clustering to customer data promotes innovation in business analytics and decision-support systems. The project strengthens data-driven industrial and commercial infrastructure. SDG 4 – Quality Education: The project enhances student understanding of unsupervised machine learning and real-world business analytics applications. It supports experiential learning and analytical skill development. SDG 10 – Reduced Inequalities: Customer segmentation enables fair and inclusive service delivery by identifying diverse customer needs and preferences, reducing bias in marketing and service offerings. SDG 12 – Responsible Consumption and Production: Targeted recommendations help reduce overproduction and unnecessary marketing, encouraging responsible consumption patterns and efficient resource utilization.
Major Project Tile- 10:	An Integrated approach to malware detection through community and social network patterns
<u>Justifications</u>	SDG 9 – Industry, Innovation and Infrastructure: The project applies advanced analytical techniques to detect malware using community behavior and social network patterns. This promotes innovation in cybersecurity systems and strengthens secure digital infrastructure. SDG 16 – Peace, Justice and Strong Institutions: By identifying malicious software and preventing cyberattacks, the system supports safer digital environments, protects user data, and strengthens trust in digital institutions and online platforms. SDG 4 – Quality Education: The project enhances student learning in cybersecurity, network analysis, and machine learning. It promotes research-oriented education and practical exposure to real-world security challenges. SDG 10 – Reduced Inequalities: Effective malware detection helps protect vulnerable users and small organizations from cyber threats,

	ensuring equitable access to secure digital services. SDG 11 – Sustainable Cities and Communities: Secure and resilient digital networks are essential for smart cities and connected communities. The project contributes to sustainable and safe digital ecosystems.
Major Project Tile- 11:	Driver drowsiness detection using deep learning
<u>Justifications</u>	SDG 3 – Good Health and Well-being: The project helps prevent road accidents by detecting driver fatigue and drowsiness using deep learning techniques. Early alerts reduce the risk of accidents, injuries, and fatalities, thereby promoting public health and safety. SDG 11 – Sustainable Cities and Communities: Improved road safety systems contribute to safer transportation networks and sustainable urban mobility. The project supports the development of smart and secure transportation systems within cities. SDG 9 – Industry, Innovation and Infrastructure: The use of deep learning for real-time driver monitoring promotes innovation in intelligent transportation systems and automotive safety technologies. SDG 13 – Climate Action: Accident prevention and smoother driving behavior reduce traffic congestion and unnecessary fuel consumption, indirectly contributing to lower emissions and environmental sustainability.
Major Project Tile- 12:	Traffic sign detection and recognition based on deep learning approach
<u>Justifications</u>	SDG 9 – Industry, Innovation and Infrastructure: The project applies deep learning and computer vision techniques to automatically detect and recognize traffic signs. This supports innovation in intelligent transportation systems and strengthens modern road infrastructure. SDG 11 – Sustainable Cities and Communities: Accurate traffic sign recognition improves road safety, traffic efficiency, and urban mobility. The system contributes to smarter, safer, and more sustainable city transportation networks. SDG 3 – Good Health and Well-being: By reducing traffic violations and road accidents, the system helps prevent injuries and fatalities, promoting public safety and overall well-being. SDG 13 – Climate Action: Efficient traffic management enabled by automated

	sign recognition reduces congestion and unnecessary fuel consumption, indirectly lowering vehicle emissions and supporting climate action.
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