Academic Year:2024-25

Roll Numbers	Project Title	SDG Goals	Justification
21R21A0401, 21R21A0402, 21R21A0404, 21R21A0420	Intelligent Password Protection Using Virtual Mapping Functions and Randomized Codes for Enhanced Cybersecurity and Ethical Hacking Prevention	SDG 9; SDG 16	Enhances digital security infrastructure to prevent data breaches (SDG 9) and strengthens institutional security and governance (SDG 16).
21R21A0419, 21R21A0415, 21R21A0417, 21R21A0425, 21R21A0439	Image Encryption Using Hand Gesture Recognition	SDG 9; SDG 11	Enables secure, innovative interaction technology (SDG 9) and improves urban digital security and accessibility (SDG 11).
22R25A0403, 21R21A0447, 21R21A0464, 21R21A0461	Design of 32-bit Arithmetic Logic Unit (ALU)	SDG 4; SDG 9	Fosters technical education and innovation in processor design (SDG 4 and 9).
21R21A0430, 21R21A0454, 21R21A0455, 21R21A0451	Design and Fabrication of Compact MIMO Antenna System for Millimeter Wave Applications	SDG 9	Contributes to next-gen communication systems critical for smart infrastructure.
21R21A0424, 21R21A0446, 21R21A0465, 21R21A0458, 21R21A0443	A Compact MIMO Antenna with EBG Structure for UWB Applications	SDG 9	Promotes high-speed wireless communication, supporting digital transformation.
21R21A0406, 21R21A0413, 21R21A0427, 21R21A0448	Designing a Power and Delay Efficient 14T SRAM Cell Using Pass Transistor Logic	SDG 7; SDG 9	Promotes energy-efficient hardware design (SDG 7) and technological advancement (SDG 9).
21R21A0416, 21R21A0412, 21R21A0440, 21R21A0463	Exploring Zigbee Technology in War Field Surveillance Robotics	SDG 9; SDG 16	Uses IoT for defense innovation (SDG 9) and national/international security (SDG 16).
21R21A0426, 21R21A0435, 21R21A0452, 21R21A0453	Wireless Black Box for Vehicles Using GSM	SDG 3; SDG 9; SDG 11	Improves road safety and emergency response (SDG 3, 9, 11).
21R21A0401, 21R21A0411, 21R21A0429, 21R21A0442	Heart Disease Prediction Using Machine Learning Algorithms	SDG 3; SDG 9	Supports early diagnosis through AI (SDG 3) and drives medical tech innovation (SDG 9).
21R21A0408, 21R21A0423,	Agri Robot	SDG 2; SDG 8;	Enhances agricultural automation (SDG 2), reduces labor dependency

21R21A0436, 22R25A0404, 22R25A0405		SDG 9	(SDG 8), and supports smart farming innovation (SDG 9).
21R21A0414, 21R21A0441, 21R21A0449, 21R21A0450	Smart Blind Assistance System Using Raspberry Pi and YOLO Object Detection	SDG 3; SDG 10	Improves health and well-being of visually impaired individuals (SDG 3) and fosters social inclusion (SDG 10).
21R21A0409, 21R21A0418, 21R21A0438, 21R21A0457	Multi-band Metamaterial-Inspired Antenna for Future THz Applications	SDG 9	Enables high-frequency communication systems for emerging industrial needs.
21R21A0422, 21R21A0428, 21R21A0431, 21R21A0432, 21R21A0434	Dual Clock FIFO for Reliable Data Transfer	SDG 4; SDG 9	Promotes education in digital systems and supports reliable digital communication design.
21R21A0456, 21R21A0407, 21R21A0444, 21R21A0462, 21R21A0404	Solar Integrated Wireless Charging for Eco-Friendly Vehicles	SDG 7; SDG 11; SDG 13	Encourages clean mobility (SDG 11), reduces carbon footprint (SDG 13), and integrates solar energy (SDG 7).
21R21A04C8, 21R21A0473, 21R21A0486, 21R21A04A5	An Efficient Web-Controlled Street Light System with Fault Detection and Energy Optimization	SDG 7; SDG 11; SDG 13	Improves energy efficiency (SDG 7), reduces urban emissions (SDG 13), and promotes smart city lighting (SDG 11).
21R21A04A1, 21R21A0488, 21R21A04C3, 22R25A0407	Advanced Tracking and Safety System	SDG 3; SDG 9; SDG 11	Promotes public safety (SDG 3), urban mobility innovation (SDG 9), and smart transport infrastructure (SDG 11).
21R21A04D0, 21R21A04A3, 21R21A04B2, 21R21A04C6	LoRa-Based Intelligent Emergency Traffic Management System	SDG 3; SDG 11; SDG 13	Enhances emergency services (SDG 3), ensures resilient urban traffic (SDG 11), and cuts emissions through optimized flow (SDG 13).
22R25A0411, 21R21A04A7, 21R21A04A4, 22R25A0409	Intelligent Academic Monitoring and Evaluation System	SDG 4; SDG 9; SDG 16	Enables fair, transparent academic systems (SDG 16), promotes inclusive education (SDG 4), and uses innovation to support learning (SDG 9).
21R21A0469, 21R21A0470, 21R21A04A8, 21R21A04A0	Smart Vehicle Ignition System using Biometric and Web-Based Data Logging	SDG 9; SDG 11; SDG 16	Enhances vehicle safety, supports smart transport (SDG 11), and prevents unauthorized access (SDG 16) via digital innovation (SDG 9).
21R21A0482, 21R21A0472, 21R21A0484, 21R21A0490	Perfect-E Based Tunable Antenna	SDG 9; SDG 11	Promotes flexible, adaptive antenna systems for smart urban and industrial applications.

21R21A04C1, 22R25A0410, 22R25A0412, 21R21A04B6	Design and Implementation of Sleeper Keeper Circuit using Cadence Virtuoso	SDG 4; SDG 9	Encourages digital design innovation (SDG 9) and enhances design skills in education (SDG 4).
21R21A04B0, 21R21A04B1, 21R21A04B3, 21R21A04B5	Spectrogram-Based Speech Enhancement with Temporal-Aware 3D-CNN and Recurrent Fusion	SDG 3; SDG 10; SDG 9	Enhances communication for people with hearing/speech difficulties (SDG 3), reduces inequality (SDG 10), and applies AI for innovation (SDG 9).
21R21A0477, 21R21A0494, 21R21A0476, 22R25A0413	VHDL-Based Design of ALU with Pipelining for High-Speed Computing	SDG 9	Improves computational efficiency through hardware design innovations.
21R21A0477, 21R21A0494, 21R21A0476, 22R25A0413	Personalized Music Streaming Through Emotion Detection using Deep Learning	SDG 3; SDG 9	Supports emotional well-being through AI personalization (SDG 3) and advances deep learning tech (SDG 9).
21R21A0468, 21R21A0474, 21R21A0466, 21R21A0475	Skin Disease Detection using Deep Learning	SDG 3; SDG 9	Enables early skin disease diagnosis using AI, improving healthcare (SDG 3) and medical technology (SDG 9).
21R21A0485, 21R21A0480, 21R21A0491, 21R21A0467	Real-Time Product Dispensing System with FPGA	SDG 9; SDG 12	Encourages innovation in automation and supports responsible production (SDG 12).
21R21A0483, 21R21A04A9, 21R21A0496, 21R21A04C0	DNA Classification using Deep Learning	SDG 3; SDG 9	Facilitates advancements in genomics for healthcare (SDG 3) and bioinformatics innovation (SDG 9).
21R21A04B4, 21R21A0481, 21R21A0487, 21R21A04B9	Community-Based Reporting and Monitoring Tool for Women's Safety	SDG 5; SDG 11; SDG 16	Empowers gender equality (SDG 5), ensures urban safety (SDG 11), and promotes justice and reporting mechanisms (SDG 16).
21R21A0497, 22R25A0408, 21R21A0479, 21R21A0492, 21R21A04C9	AI-Driven Healthcare Chatbot Using NLP and Deep Learning Techniques	SDG 3; SDG 9	Enhances access to health information (SDG 3) using AI innovations (SDG 9).
20R20A0442, 21R21A0471, 20R20A04C4	Implementation of Data Hiding Under Audio Using Discrete Wavelet Transform	SDG 9; SDG 16	Strengthens secure communication and data protection (SDG 16) using signal processing innovation (SDG 9).
21R21A04G1, 21R21A04E2, 21R21A04D3, 21R21A04E1	VLSI Design and Implementation of CMOS and Transmission Gate Based Full Adder Using	SDG 4; SDG 9	Promotes high-quality education in advanced chip design (SDG 4) and supports technological innovation in VLSI (SDG 9).

	CADENCE		
21R21A04D8, 21R21A04E8, 21R21A04D9, 21R21A04G0	Triband MIMO Millimeter Wave Phased Array Antenna	SDG 9; SDG 11	Enhances communication technologies (SDG 9) and supports smart city infrastructure (SDG 11).
21R21A04D5, 21R21A04G5, 21R21A04D1, 21R21A04F2	Smart Wireless Train Alert and Monitoring System	SDG 3; SDG 9; SDG 11	Improves railway safety (SDG 3), supports transport innovation (SDG 9), and enhances urban connectivity (SDG 11).
21R21A04G3, 21R21A04G8, 21R21A04G9, 21R21A04K1	Design and Analysis of Low Power SRAM for Real-Time Applications	SDG 7; SDG 9	Encourages low-power memory innovations (SDG 7) essential for efficient digital systems (SDG 9).
21R21A04J0, 21R21A04H1, 21R21A04G6, 21R21A04J4	Dual Clock for Reliable Data Transfer	SDG 9	Ensures reliable communication in digital systems through advanced design (SDG 9).
21R21A04J7, 22R25A0418, 21R21A04K2, 21R21A04H0	Histogram-Driven Multistage Detection Model for Brain Tumor Identification in Medical Scans	SDG 3; SDG 9	Enhances early disease detection (SDG 3) using medical imaging innovations (SDG 9).
22R25A0415, 21R21A04H4, 21R21A04F3	Hand Gesture-Based Face Recognition for Visibly Impaired People Using CNN	SDG 3; SDG 10	Provides assistive solutions for the visually impaired (SDG 3) and supports digital equity (SDG 10).
21R21A04J6, 22R25A0416, 21R21A04J1, 21R21A04H5	V2V System Congestion Control Validation Using CAN Communication	SDG 9; SDG 11	Aids in smart transportation development and congestion management (SDG 11) using IoT-based innovation (SDG 9).
21R21A04F5, 21R21A04F8, 21R21A04F9, 21R21A04E4	Enhanced User Assistance via NLP Powered Robot Collaboration	SDG 3; SDG 9	Integrates NLP in robotics to provide support systems for health and daily living (SDG 3, SDG 9).
21R21A04J2, 22R25A0417, 22R25A0419, 22R25A0420	Design and Implementation of Women Auspice System Using GPS and GSM	SDG 5; SDG 11; SDG 16	Strengthens safety and empowerment for women (SDG 5), urban safety (SDG 11), and justice (SDG 16).
21R21A04H2, 21R21A04F7, 21R21A04J3, 21R21A04H3	Compact Slotted Microstrip Antenna for 5G Applications Operating at 28 GHz	SDG 9; SDG 11	Supports infrastructure for 5G deployment (SDG 9), fostering digital access in smart cities (SDG 11).
21R21A04G4, 21R21A04H8, 21R21A04J8, 21R21A04E9, 21R21A04D6	Adapted approach for fruit diseases identification using images	SDG 2; SDG 3; SDG 9	Enhances agricultural productivity (SDG 2), promotes health via early detection (SDG 3), and applies ML innovation (SDG 9).

21R21A04E7, 21R21A04E5, 21R21A04H6, 21R21A04K4	Design of SIW Antenna for Wireless Application	SDG 9; SDG 11	Supports high-speed wireless infrastructure (SDG 9) vital for smart city applications (SDG 11).
21R21A04K0, 21R21A04E3, 21R21A04F1, 21R21A04F6	Advanced Vehicle Tracking and Safety System	SDG 3; SDG 11; SDG 16	Enhances road safety (SDG 3), supports urban mobility (SDG 11), and promotes secure tracking systems (SDG 16).
21R21A04D7, 21R21A04G7, 21R21A04J5, 21R21A04H7	Dual-Band Microstrip Patch Antenna with 5.25GHz Applications	SDG 9	Promotes advancements in antenna technology for modern communication systems (SDG 9).
21R21A04D4, 21R21A04E0, 21R21A04K3, 21R21A04J9	Design of River Cleaning Robot Using Arduino Uno	SDG 6; SDG 9; SDG 14	Supports clean water goals (SDG 6), robotics innovation (SDG 9), and aquatic ecosystem protection (SDG 14).
21R21A04D2, 21R21A04E6, 21R21A04F0	Gesture Controlled Applicator	SDG 3; SDG 9; SDG 10	Improves assistive technologies for differently abled (SDG 3, 10) using embedded innovation (SDG 9).
21R21A04L1, 21R21A04K8, 21R21A04Q9, 21R21A04Q4	Sign Language to Text/Speech Converter using python and machine learning	SDG 4; SDG 10	Enables inclusive communication and education for the hearing impaired (SDG 4, 10).
21R21A04P3, 21R21A04P7, 21R21A04M, 21R21A04K5	Deep Learning-Based Brain MRI Segmentation and Tumor Detection	SDG 3; SDG 9	Facilitates early diagnosis through AI imaging tools (SDG 3), boosting innovation (SDG 9).
21R21A04Q1, 21R21A04Q2, 21R21A04Q3, 21R21A04Q7	Timing Analysis of AES-128 in Python and FPGA-Based Verilog Design	SDG 9; SDG 16	Supports secure encryption (SDG 16) through VLSI innovations (SDG 9).
21R21A04L2, 21R21A04M, 22R25A0421, 22R25A0425	Attendance Marking System Based on Facial Recognition	SDG 4; SDG 9; SDG 16	Promotes automated, fair monitoring in education systems (SDG 4, 16) using AI (SDG 9).
21R21A04K7, 21R21A04N1, 21R21A04N2, 21R21A04Q0	AI-Enhanced MRI Analysis for Brain Tumor Classification using Deep learning	SDG 3; SDG 9	Uses AI to support healthcare diagnostics (SDG 3) with innovation in DL (SDG 9).
21R21A04K6, 21R21A04L6, 21R21A04L9, 21R21A04M3	Design of seamless and secure Transaction of an ATM beyond PIN verification using verilog	SDG 9; SDG 16	Enhances digital banking security (SDG 16) through VLSI design (SDG 9).
21R21A04Q5, 21R21A04R0, 21R21A04R2,	Integrated Bone Fracture Detection & Healthcare Management using Deep	SDG 3; SDG 9	Improves orthopedic diagnostics using deep learning (SDG 3, 9).

21R21A04R7	learning		
21R21A04R8, 21R21A04N8, 21R21A04M, 21R21A04L7	Design and Layout of 7T Half Adder	SDG 4; SDG 9	Strengthens VLSI education and logic design skills (SDG 4, 9).
21R21A04N4, 22R25A0427, 21R21A04L8, 21R21A04N0	Physical Design Workflow for Elevator Using QFlow	SDG 4; SDG 9; SDG 11	Enhances VLSI education (SDG 4), tool-based design innovation (SDG 9), and smart safety in infrastructure (SDG 11).
21R21A04P2, 21R21A04P4, 22R25A0426	Machine learning -Enabled Spectrally and power efficient Optical OFDM for 6G Communications	SDG 9; SDG 11	Supports innovation in 6G technologies (SDG 9) and strengthens digital infrastructure (SDG 11).
21R21A04M, 21R21A04L3, 21R21A04R6, 21R21A04M7	Multiband MIMO Antenna for Indoor Applications	SDG 9	Facilitates next-gen indoor connectivity for telecom systems (SDG 9).
21R21A04Q6, 21R21A04R5, 22R25A0422, 21R21A04P8	Brain Image Analysis for detection of Alzheimer's using Deep leaning	SDG 3; SDG 9	Boosts healthcare diagnosis for neurodegenerative disease using deep learning (SDG 3, 9).
21R21A04N5, 21R21A04N6, 21R21A04M6 , 22R25A0425	Emotion-Based Music Recommendation System	SDG 3; SDG 9	Enhances mental well-being and personalized interaction through AI/ML (SDG 3, 9).
22R25A0423, 21R21A04L4, 21R21A04M, 21R21A04L0	Wireless Safety Check System in Amusement Parks	SDG 3; SDG 9; SDG 11	Improves public safety (SDG 3), embeds IoT innovation (SDG 9), supports smart recreational infrastructure (SDG 11).
21R21A04N5 21R21A04N6, 21R21A04M, 22R25A0425	Disease prediction based on symptoms and doctor appointment	SDG 3, SDG 9	Helps people get early prediction of health issues and access timely medical appointments, promoting preventive healthcare and well-being(SDG 3). Uses AI/ML or rule-based systems to innovate digital health services, improving accessibility and efficiency of health infrastructure(SDG 9).
21R21A04P1, 21R21A04L5, 21R21A04R1, 21R21A04N9	Blockchain-Based Management of Blood Donation	SDG 3; SDG 9; SDG 16	Improves healthcare logistics (SDG 3), secures digital transactions (SDG 16), and promotes transparency (SDG 9).

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Roll Numbers	Project Title	SDG Goals	Justification
20R21A0402, 20R21A0421, 20R21A0432, 20R21A0452	Design of 16-bit SRAM Memory using Cadence	SDG 4; SDG 9	Promotes advanced VLSI design education (SDG 4) and innovation in memory architecture (SDG 9).
21R25A0402, 21R21A0403, 20R21A0405, 20R21A0426, 20R21A0458	Design and Implementation of Mini-Size Search Robot	SDG 9; SDG 11	Enhances robotic applications for urban monitoring (SDG 11) and supports embedded innovation (SDG 9).
20R21A0447, 20R21A0408, 20R21A0413, 20R21A0429	Intelligence Surveillance Robot	SDG 9; SDG 16	Improves public safety (SDG 16) through surveillance robotics (SDG 9).
20R21A0411, 20R21A0412, 20R21A0440, 20R21A0446	Design of Low Power XOR Gate to Reduce Power Consumption in 90nm Technology	SDG 7; SDG 9	Contributes to energy-efficient circuit design (SDG 7) and promotes innovation in semiconductor technology (SDG 9).
20R21A0435, 20R21A0444, 20R21A0445, 20R21A0451	Surveillance Robot	SDG 16; SDG 9	Enhances security monitoring using robotic platforms (SDG 16), enabling innovation in autonomous systems (SDG 9).
20R21A0404, 20R21A0423, 20R21A0419, 20R25A0404, 20R25A0406	Arduino-Powered Firefighter Assistance System	SDG 3; SDG 9; SDG 11	Supports firefighter safety (SDG 3), emergency response innovation (SDG 9), and disaster-resilient infrastructure (SDG 11).
20R21A0407, 20R21A0410, 20R21A0417, 20R21A0428, 20R21A0427	Smart Gloves for Handicapped with Home Automation	SDG 3; SDG 10; SDG 9	Promotes assistive technologies for the differently abled (SDG 3, 10), using embedded innovation (SDG 9).
20R21A0403, 20R21A0406, 20R21A0433, 20R21A0436	Fingerprint Based EVM	SDG 9; SDG 16	Promotes secure and transparent elections using embedded biometric tech (SDG 16), with digital innovation (SDG 9).
20R21A0415, 20R21A0437, 20R21A0441, 20R21A0454	Smart Flower Solar System	SDG 7; SDG 13	Encourages renewable energy usage and awareness through innovation (SDG 7), combating climate change (SDG 13).
20R21A0455, 20R21A0449, 20R21A0438,	UWB Antenna Gain Enhancement for GPR Applications	SDG 9	Enhances ground-penetrating radar systems for infrastructure and safety uses via antenna design innovation

20R21A0450			(SDG 9).
20R21A0409, 20R21A0430, 19R21A0447	Centralized Monitoring System for Street Light Fault Detection and Location Tracking	SDG 7; SDG 11; SDG 13	Supports energy-efficient smart infrastructure (SDG 7), sustainable urban development (SDG 11), and climate action through smart monitoring (SDG 13).
20R21A0457, 20R21A0456, 20R21A0459, 20R21A0460	Accident Detection and Rescue System	SDG 3; SDG 11	Enhances emergency response and accident recovery systems (SDG 3), contributing to safe city infrastructure (SDG 11).
20R21A0418, 20R21A0448, 20R21A0420, 20R21A0439	Smart Irrigation System Using IoT	SDG 2; SDG 6; SDG 9	Improves agricultural efficiency (SDG 2), water conservation (SDG 6), and promotes innovation in smart farming (SDG 9).
20R21A0414, 20R21A0416, 20R21A0434	Mini Seekar	SDG 9	Encourages compact robotic exploration systems and innovation in embedded platforms (SDG 9).
20R21A0422, 20R21A0431, 20R21A0443	Smart Irrigation Management System	SDG 2; SDG 6; SDG 9	Ensures sustainable water management in agriculture (SDG 6), promotes food security (SDG 2), and digital agriculture (SDG 9).
20R21A0414, 20R21A0416, 20R21A0434	Smart Traffic Management System	SDG 11; SDG 13	Promotes efficient traffic control in urban areas (SDG 11) and reduces vehicle emissions (SDG 13).
20R21A0424	AI Powered Virtual Assistant	SDG 9; SDG 4	Fosters digital innovation (SDG 9) and supports AI-based learning and education tools (SDG 4).
20R21A0489, 20R21A0478, 20R21A0487, 20R21A0466	LPG Gas Leakage Detection System	SDG 3; SDG 9	Improves household safety (SDG 3) using embedded sensor-based innovation (SDG 9).
20R21A04A3, 20R21A0483, 20R21A04B3, 20R21A04A4	All-Terrain Surveillance Robot	SDG 9; SDG 16	Enables remote surveillance and rescue in difficult terrain (SDG 16) using robotics (SDG 9).
20R21A0462, 20R21A0481, 20R21A0488, 20R21A0495	FR4 MIMO Antenna for 5G Applications	SDG 9	Supports next-generation communication infrastructure (SDG 9) through MIMO antenna development.
20R21A0473, 20R21A04A6, 20R21A0479, 20R21A04B8	Spraying Agricultural Pesticides Robot	SDG 2; SDG 9; SDG 15	Promotes agricultural innovation (SDG 9), increases yield and food security (SDG 2), and reduces harmful manual exposure (SDG 15).
20R21A04B6, 20R21A04C0, 20R21A04A0	Lower Power Design using HDL	SDG 7; SDG 9	Promotes energy-efficient digital hardware development (SDG 7) through HDL design (SDG 9).

20R21A0486, 20R21A0470, 20R21A0485, 20R21A0480	Distance Measurement using Arduino UNO and Ultrasonic Sensor	SDG 9	Supports sensor-based distance automation, promoting innovation in embedded applications (SDG 9).
20R21A0469, 20R21A04B5, 21R25A0408, 21R25A0407	GPS-GSM Based Theft Detection	SDG 9; SDG 11; SDG 16	Enhances vehicle and asset security using embedded tech (SDG 9, 16) and contributes to urban safety (SDG 11).
20R21A0482, 20R21A0492, 20R21A0494, 20R21A04A1	PIR Sensor-Based Security Alarm System	SDG 9; SDG 16	Promotes smart home security innovation (SDG 9) and contributes to safer living environments (SDG 16).
20R21A04A5, 20R21A04B7, 20R21A0491, 20R21A04B4	Design and Analysis of Inset-Fed Microstrip Patch Antenna	SDG 9	Supports communication advancement through efficient antenna design (SDG 9).
20R21A04A8, 20R21A0468, 20R21A04B0, 20R21A04B1	Image-Based Brain Tumor Analysis Using ML	SDG 3; SDG 9	Improves early diagnosis and treatment planning through medical imaging and AI (SDG 3, 9).
20R21A04A2, 20R21A04B9, 20R21A04A9, 20R21A0490	Miniaturized UWB Antenna	SDG 9	Facilitates high-frequency communication in compact form factors, enabling IoT and mobile innovations (SDG 9).
20R21A0472, 20R21A0474, 20R21A0475, 21R25A0410	Smart Farming using IoT	SDG 2; SDG 9; SDG 12	Supports sustainable farming with IoT (SDG 2), improves efficiency (SDG 9), and encourages responsible consumption (SDG 12).
20R21A0467, 20R21A096, 20R21A071, 20R21A0499	Low Power Design of SPI & I2C Protocol	SDG 9; SDG 7	Optimizes embedded communication with energy efficiency (SDG 7) and innovation (SDG 9).
20R21A0497, 20R21A04A7, 20R21A0476, 20R21A0461	Advanced Helmet Detection with Biometric System	SDG 3; SDG 9; SDG 11	Promotes rider safety (SDG 3), enables biometric security in smart cities (SDG 11), and supports embedded tech innovation (SDG 9).
20R21A0477	Exploring Zigbee Technology in Warfield	SDG 9; SDG 16	Enables secure and efficient military surveillance systems (SDG 16) using wireless communication technology (SDG 9).
20R21A04D6, 20R21A04C3, 21R21A04C9, 21R25A0414	Hardware Implementation of Virtual Telepresence Robot for Medical Services	SDG 3; SDG 9	Enhances remote patient monitoring and access to healthcare (SDG 3) via robotic innovation (SDG 9).
20R21A04F6, 20R21A04D7,	Ensuring Trustworthy Elections with Dual	SDG 9; SDG 16	Promotes secure and transparent elections using biometric technology

20R21A04F4, 20R21A04F0	Biometric Verification		(SDG 16) and embedded systems (SDG 9).
20R21A04C7, 20R21A04C5, 20R21A04E2	Automated Irrigation System using IoT	SDG 2; SDG 6; SDG 9	Supports smart agriculture (SDG 2), efficient water usage (SDG 6), and digital innovation (SDG 9).
20R21A04G8, 20R21A04C2, 20R21A04D4, 20R21A04D2	Railway Track Crack Detection System using Arduino	SDG 9; SDG 11	Enhances railway safety and supports resilient infrastructure (SDG 11) with embedded innovation (SDG 9).
20R21A04D3, 20R21A0418, 20R21A04E0, 20R21A04H1	Sign Language Translation System with Both Hands Using Deep Learning	SDG 10; SDG 4; SDG 9	Promotes inclusive communication for the hearing impaired (SDG 10), education access (SDG 4), and AI innovation (SDG 9).
20R21A0416, 20R21A04H8, 20R21A04J0, 20R21A04H3	Underground Cable Fault Detection using IoT	SDG 9; SDG 11	Improves fault detection in smart grids and promotes resilient infrastructure (SDG 9, SDG 11).
20R25A0417, 20R21A04E7, 20R21A04G6, 20R21A04H2	Hardware implementation of Safezone Intelligent Workspace Hazard Monitoring	SDG 3; SDG 9; SDG 8	Enhances worker safety and industrial automation (SDG 3, 8) through smart embedded systems (SDG 9).
20R21A04F9, 20R21A04G9, 20R21A04C6, 21R25A0413	CHOS-Infused FPGA Bitwise Pseudo Random Number Generator	SDG 9	Improves data security and computational randomness using VLSI design innovation (SDG 9).
20R21A04E4, 20R21A04E3, 20R21A04E9, 21R25A0415	Brain Controlled Wheelchair	SDG 3; SDG 9; SDG 10	Enhances mobility and independence for people with disabilities (SDG 3, 10) through neuro-based embedded innovation (SDG 9).
20R21A04F8, 20R21A04C8, 20R21A04E8, 20R21A04D8	Gain Enhancement of a novel antenna with AMC for Millimeter Wave applications	SDG 9; SDG 11	Supports high-speed urban communication systems (SDG 11) through antenna technology innovation (SDG 9).
20R21A04E5, 20R21A04G7, 20R21A04F5, 20R21A04G4	Autonomous Live Streaming video Surveillance Robot using DTH 11 Sensor&MQ2 Sensor	SDG 16; SDG 9	Enhances safety and disaster monitoring (SDG 16) using embedded sensor-based robotics (SDG 9).
20R21A04G0, 20R21A04G1, 20R21A04C1, 20R21A04H7	Ultrasonic Blind Stick with GPS	SDG 3; SDG 10	Promotes assistive mobility for visually impaired (SDG 3, 10) with GPS-integrated innovation (SDG 9).
20R21A04F2, 20R21A04H4, 20R21A04F3, 20R21A04G5	Hardware Implementation of GSM-Integrated Remote Whiteboard	SDG 4; SDG 9	Enhances access to education and collaborative tools (SDG 4) using wireless embedded tech (SDG 9).
20R21A04D1,	High Gain artificial magnetic	SDG 9	Contributes to advanced antenna

20R21A04D9, 20R21A04D0, 20R21A04H6	conductor Integrated Antenna for 5G Applications		systems for 5G connectivity (SDG 9).
20R21A04E1, 20R21A04G3, 20R21A04G2, 20R21A04F7	Smart and secure Fingerprint Attendance System Using Arduino	SDG 9; SDG 16	Enables secure and tamper-proof attendance tracking (SDG 16) through embedded hardware (SDG 9).
20R21A04H0, 20R21A04F1, 20R21A04H9	Building Management System Using Arduino	SDG 9; SDG 11	Automates infrastructure control for smart buildings (SDG 11) with innovation in embedded platforms (SDG 9).
20R21A04P4, 20R21A04N9, 20R21A04K1, 20R21A04J5	FIR Filtering with Koggie-Stone Adder & Booth Multiplier	SDG 9	Enhances VLSI performance through efficient digital filter design (SDG 9).
20R21A04L5, 20R21A04P1, 20R21A04L6, 20R21A04L7	Li-Fi Technology for Highway Navigation	SDG 9; SDG 11	Improves vehicular communication and traffic systems (SDG 11) via Li-Fi innovation (SDG 9).
20R21A04L3, 20R21A04N1, 20R21A04M7, 20R21A04N6	Automated Vehicle Speed Control Based on Signals	SDG 3; SDG 11	Promotes traffic safety and intelligent transportation systems (SDG 3, SDG 11).
20R21A04N7, 20R21A04M1, 20R21A04J4, 20R21A04P2	5T SRAM Cell Design With Improved Speed Using Cmos Technologies For Iot Applications	SDG 4; SDG 9	Advances low-power memory design, supporting VLSI education and innovation (SDG 4, 9).
20R21A04P4, 20R21A04P5, 20R21A04K1, 20R21A04J5	Three parallel polyphase odd length FIR filter with adder and booth multiplier	SDG 9	Promotes efficient signal processing hardware architecture using VLSI (SDG 9).
21R25A0423, 21R25A0419, 20R21A04K2 20R21A04K8	Implementation of Image Denoising with Reverse Carry Adder in LPF	SDG 9	Enhances digital image processing through custom VLSI filtering techniques (SDG 9).
21R25A0421, 20R21A0424, 20R21A04J7, 21R25A0420	Design of multiplier using QCA	SDG 9	Supports nanoscale hardware design innovation using Quantum-dot Cellular Automata (SDG 9).
20R21A04M4, 20R21A04M5, 21R25A04K7, 20R21A04J8	Design and implementation of Insetfed Microstrip Patch Antenna for X-band	SDG 9	Facilitates high-frequency communication design innovations (SDG 9).

20R21A04J9, 20R21A04L1, 20R21A04J3, 20R21A04M0	Embedded Automatic robotics vehicle navigation system through SMS	SDG 9; SDG 11	Supports smart mobility and remote automation in navigation (SDG 9, 11).
20R21A04J6, 20R21A04K6, 20R21A04L9, 20R21A04K0	Enhanced School Transport and Security System	SDG 4; SDG 11	Promotes safe transportation for school children using embedded innovation (SDG 4, 11).
20R21A04K4, 20R21A04N4, 20R21A04Q0, 20R21A04L2	Embedded Surveillance System for Children Struck in Car	SDG 3; SDG 9; SDG 11	Enhances child safety in vehicles (SDG 3), promotes emergency alert systems in smart transport (SDG 11), and supports embedded innovation (SDG 9).
20R21A04J1, 20R21A04N5, 20R21A04M6, 20R21A04K3	Fingerprint and Passcode-Based Anti-Theft Vehicle System	SDG 9; SDG 16	Enhances vehicular security using biometric systems (SDG 16), supported by embedded system innovation (SDG 9).
20R21A04N2, 20R21A04N0, 20R21A04M3, 21R25A04P7	Brain Tumor Detection and classification Using Artificial Intelligence	SDG 3; SDG 9	Improves early medical diagnosis (SDG 3) through deep learning and medical image processing (SDG 9).
20R21A04N2, 20R21A04N0, 20R21A04M3, 20R21A04P7	Chip design forTurbo Encoder Module Design for In-Vehicle Systems	SDG 9	Supports efficient in-vehicle communication through advanced VLSI design techniques (SDG 9).
20R21A04K5, 20R21A04L8	Improve coal mining Efficiency & safety by Monitoring equipment in real time using Embedded system(DGS)THROUGH inset-feed frequency	SDG 8; SDG 9; SDG 11	Improves occupational safety (SDG 8), enables smart industry innovation (SDG 9), and promotes safer infrastructure (SDG 11).

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Roll Numbers	Project Title	SDG Goals	Justification
19R21A0431, 19R21A0410, 19R21A0459, 19R21A0460	Land Vehicle Black Box System Using IoT	SDG 9; SDG 11; SDG 16	Enhances vehicle monitoring (SDG 16), supports intelligent transport systems (SDG 11), and promotes IoT innovation (SDG 9).
19R21A0428, 19R21A0405, 19R21A0448, 19R21A0449	GUI for Dual Tone Multi Frequency Dialing Systems	SDG 9	Promotes telecommunications interface design and simulation using DSP tools (SDG 9).
19R21A0440, 19R21A0444, 19R21A0421, 19R21A0423	Panoramic Image Stitching Using Python	SDG 9	Enables visual data enhancement and image processing through software innovation (SDG 9).
19R21A0416, 19R21A0424, 19R21A0406, 19R21A0434	Audio Data Hiding Using Discrete Wavelet Transform	SDG 9; SDG 16	Promotes secure audio transmission (SDG 16) using advanced signal processing (SDG 9).
19R21A0420, 19R21A0409, 19R21A0437, 20R25A0405	Speech Enhancement Using Wiener Filtering	SDG 3; SDG 9	Supports clearer communication in various environments (SDG 3) using DSP-based techniques (SDG 9).
19R21A0402, 20R25A0401, 20R25A0404, 20R25A0406	Cadence-Based Circuit Design on Narrow Band Amplifiers	SDG 4; SDG 9	Promotes VLSI tool usage in analog RF design for student training (SDG 4, 9).
19R21A0408, 19R21A0458, 20R25A0402, 20R25A0403	Hand Gesture Recognition Communication System	SDG 10; SDG 3; SDG 9	Improves accessibility for differently-abled individuals (SDG 3, 10) using embedded AI solutions (SDG 9).
19R21A0446, 19R21A0438, 19R21A0435, 19R21A0403	Attendance Monitoring with Visually Masked QR Code	SDG 4; SDG 9	Promotes innovation in automated academic monitoring (SDG 4) using embedded image processing (SDG 9).
19R21A0419, 19R21A0427, 19R21A0425, 19R21A0404	Energy Optimization for Solar Street Lighting Systems	SDG 7; SDG 11; SDG 13	Promotes clean energy (SDG 7), improves urban sustainability (SDG 11), and reduces carbon emissions (SDG 13).
19R21A0454, 19R21A0436, 19R21A0432, 19R21A0407	Blood Group Detection Using MATLAB	SDG 3; SDG 9	Supports healthcare diagnostics using image processing tools (SDG 3) and AI innovation (SDG 9).
19R21A0451, 19R21A0429,	E-Shape Patch Antenna with DGS	SDG 9	Advances compact antenna systems for wireless communication via

19R21A0442			simulation (SDG 9).
19R21A0401, 19R21A0443, 19R21A0445, 19R21A0457	Monopole Antenna with Bandpass Filters	SDG 9	Supports antenna innovation for broadband applications using advanced RF design (SDG 9).
19R21A0414, 19R21A0418, 19R21A0433, 19R21A0439	Two-Way Communication for Sewage Worker Safety	SDG 3; SDG 6; SDG 9	Enhances occupational safety (SDG 3), sanitation system monitoring (SDG 6), and supports embedded innovations (SDG 9).
19R21A0430, 19R21A0426, 20R25A0407, 19R21A0441	Deep Learning for Medical Imaging	SDG 3; SDG 9	Improves diagnostic efficiency and accuracy in healthcare systems (SDG 3) through AI innovation (SDG 9).
19R21A0413, 19R21A0415, 19R21A0453, 19R21A0456, 19R21A0412	Cadence-Based Circuit Design	SDG 4; SDG 9	Strengthens VLSI learning environments and supports circuit-level design innovation (SDG 4, SDG 9).
19R21A0471, 19R21A04A9, 20R25A0411, 19R21A04B7	Secure Watermarking for Video Surveillance	SDG 16; SDG 9	Enhances video authenticity and privacy (SDG 16) using secure image processing methods (SDG 9).
19R21A0479, 19R21A04A6, 19R21A04B4, 19R21A0488	Medical Video Watermarking for Telemedicine Applications	SDG 3; SDG 9	Supports secure and reliable medical imaging for telemedicine (SDG 3) through DSP and watermarking innovation (SDG 9).
19R21A0465, 19R21A0483, 19R21A04A2, 19R21A0498	Humanoid and Snake Robot Design	SDG 9	Promotes robotics design and motion control innovation for diverse environments (SDG 9).
19R21A0482, 19R21A0492, 19R21A0468, 19R21A0491	IoT-Based Home Automation Using Cloud	SDG 7; SDG 9; SDG 11	Enables smart energy usage (SDG 7), supports urban home automation (SDG 11), and IoT-cloud integration (SDG 9).
19R21A0481, 19R21A04A0, 19R21A0469, 20R25A0408	Smart Ambulance and Traffic Management System	SDG 3; SDG 9; SDG 11	Enhances emergency transport efficiency (SDG 3) using smart city innovation (SDG 11, SDG 9).
19R21A0495, 19R21A04A5, 19R21A0478, 19R21A0494	Smart Helmet for Accident Prevention	SDG 3; SDG 9	Improves rider safety and promotes real-time accident detection (SDG 3) through embedded design (SDG 9).
19R21A0474, 19R21A0472, 19R21A0466, 19R21A0480	Hydroponics-Based Farming Using IoT	SDG 2; SDG 6; SDG 9	Promotes food sustainability (SDG 2), efficient water use (SDG 6), and precision agriculture (SDG 9).

19R21A0470, 19R21A0464, 19R21A0473, 19R21A04B9	Sensor-Based Vehicle Parking System	SDG 11; SDG 9	Enables efficient parking infrastructure and automation for urban spaces (SDG 11, 9).
19R21A0484, 19R21A0485, 19R21A0487, 19R21A0490	Smart Mirror Using Arduino	SDG 9; SDG 3	Provides personalized IoT-based interfaces for smart health and home usage (SDG 3, 9).
19R21A04B0, 19R21A0462, 19R21A0463, 19R21A0497	Neural Network-Based Word Recognition System	SDG 4; SDG 9; SDG 10	Improves accessibility for language and literacy learning (SDG 4, 10) using AI and ML innovation (SDG 9).
19R21A04A1, 19R21A0493, 19R21A0489, 19R21A04C0	Path-Following Robot by Trajectory	SDG 9	Promotes intelligent robotic navigation systems and path planning (SDG 9).
19R21A04A7, 19R21A0461, 19R21A0476, 19R21A0467	IR Sensor-Based Traffic Management	SDG 11; SDG 9	Supports efficient urban traffic control using embedded sensor systems (SDG 11, 9).
19R21A04A3, 19R21A04B8, 19R21A04A4, 19R21A04B6	PLC-Based Home Automation & Leakage Detection	SDG 6; SDG 7; SDG 9	Enhances smart home safety (SDG 6), promotes energy efficiency (SDG 7), and supports IoT automation (SDG 9).
20R25A0410, 20R25A0409, 19R21A0477, 19R21A04B5	Two-Stage Op-Amp and 3-Bit Flash ADC	SDG 9	Promotes low-power analog-digital circuit design innovation (SDG 9).
19R21A04B1, 19R21A0499, 20R25A0412, 19R21A04B2	Smart Guidance System for Visually Impaired	SDG 3; SDG 10; SDG 9	Supports safe indoor navigation for the differently abled (SDG 3, 10) with embedded system design (SDG 9).
19R21A0475	Crop Dryer Using Embedded Systems	SDG 2; SDG 9; SDG 12	Supports post-harvest preservation (SDG 2), energy-efficient embedded drying (SDG 9), and responsible agricultural technology (SDG 12).
19R21A04H2, 19R21A04H8, 19R21A04H3, 19R21A04C9	Cardiovascular Inspection Using Deep Learning	SDG 3; SDG 9	Supports early diagnosis of heart conditions (SDG 3) using AI-enabled medical image processing (SDG 9).
19R21A04C8, 19R21A04F8, 19R21A04G1, 19R21A04G2	Four-Point FFT Implementation Using Quantum Logic Gates	SDG 9	Promotes innovation in quantum computing and signal processing systems (SDG 9).
19R21A04D6, 19R21A04D8,	Automatic Generation of Certificates Using MATLAB	SDG 9	Supports digitization of administrative tasks and promotes

19R21A04F6, 19R21A04G3			computing innovation (SDG 9).
19R21A04H1, 19R21A04H5, 19R21A04G8, 19R21A04H6	Bitcoin Price Prediction Using Machine Learning	SDG 8; SDG 9	Promotes financial analytics (SDG 8) and supports AI-based data modeling (SDG 9).
19R21A04C3, 19R21A04H4, 20R25A0416, 20R25A0413	Emergency Vehicle Clearance Using Smart Traffic Control	SDG 11; SDG 9	Supports smart mobility in urban areas (SDG 11) and embedded automation (SDG 9).
19R21A04E4, 19R21A04E5, 19R21A04E7, 19R21A04H7	Data Mining of Medical Records Using AWS Cloud	SDG 3; SDG 9	Enhances healthcare analytics (SDG 3) and promotes cloud-based innovation (SDG 9).
19R21A04D5, 19R21A04D7, 19R25A04F5, 19R21A04G6, 19R21A04E1	Hand Gesture to Speech & Voice Conversion	SDG 10; SDG 3; SDG 9	Improves communication accessibility for differently abled (SDG 10, 3) through assistive embedded technology (SDG 9).
19R21A04G0, 19R21A04G5, 19R21A04F1	QR Code-Based Train Ticket Booking	SDG 9; SDG 11	Supports digital infrastructure for transportation services and booking automation (SDG 9, 11).
19R21A04C4, 20R25A0417, 19R21A04H0, 19R21A04F7	Renewable Energy Integration in Smart Agriculture	SDG 2; SDG 7; SDG 9	Supports energy-efficient smart farming (SDG 2, 7) and IoT-based agricultural innovation (SDG 9).
19R21A04D1, 19R21A04D2, 19R21A04C7, 19R21A04C2	Deep Learning for Agriculture Aid and ISB Platform	SDG 2; SDG 9	Supports AI-driven agricultural decision systems and smart farming applications (SDG 2, 9).
19R25A04D0, 19R21A04D9, 19R21A04F2, 19R21A04G4	IoT-Based Coal Mine Safety and Health Monitoring	SDG 3; SDG 8; SDG 9	Improves worker safety and health (SDG 3, 8) using sensor-based embedded systems (SDG 9).
19R25A04F4, 19R21A04E8, 20R25A0414, 20R25A0415	Lung Cancer Detection in CT Image	SDG 3; SDG 9	Aids early diagnosis of lung diseases (SDG 3) with deep learning-based image analysis (SDG 9).
19R21A04F3, 19R21A04E9, 19R21A04G7, 19R21A04D4	Soldier Location and Health Monitoring	SDG 3; SDG 9; SDG 16	Supports field safety and monitoring in defense (SDG 3, 16) with embedded tech innovation (SDG 9).
19R21A04C5, 19R21A04C1, 19R21A04G9	IoT-Based Security Surveillance System	SDG 11; SDG 16; SDG 9	Enhances public safety and real-time monitoring through smart surveillance (SDG 11, 16, 9).
19R21A04C6,	College Bus Tracking and	SDG 4;	Improves student safety (SDG 4),

19R21A04D3, 19R21A04E6, 19R21A04J0	Alerting System	SDG 11; SDG 9	urban mobility (SDG 11), and transportation tracking (SDG 9).
19R21A04M0, 19R21A04M5, 19R21A04L7, 19R21A04J5	Accident Detection and Avoidance System	SDG 3; SDG 11	Promotes transport safety (SDG 3) through embedded emergency detection, contributing to safer cities (SDG 11).
19R21A04N2, 19R21A04K9	Crop Dryer System Design	SDG 2; SDG 9; SDG 12	Enables agricultural processing efficiency (SDG 2), reduces waste (SDG 12), and applies embedded innovation (SDG 9).
19R21A04P6, 19R21A04P1, 19R21A04N8, 20R25A0418	Soldier Assistant Device using LoRa	SDG 3; SDG 9; SDG 16	Improves military personnel safety (SDG 3, 16) via long-range embedded communication (SDG 9).
19R21A04J6, 19R21A04L0, 19R21A04M1, 19R21A04M3	Image Classification of Abnormal Red Blood Cells	SDG 3; SDG 9	Enhances medical diagnostics (SDG 3) using AI-based image classification (SDG 9).
19R21A04N9, 19R21A04L6, 19R21A04K0, 20R25A0419	Sign Language Translator Using MATLAB	SDG 10; SDG 4; SDG 9	Promotes inclusive communication and learning for differently abled (SDG 10, 4) with digital tools (SDG 9).
19R21A04L1, 19R21A04N3, 19R21A04N6, 19R21A04L9	Deep CNN for MAD Diagnosis from Radiographs	SDG 3; SDG 9	Supports early detection of musculoskeletal conditions (SDG 3) using AI in radiology (SDG 9).
19R21A04K7, 19R21A04K2, 20R25A0420, 20R25A0421	Face Recognition-Based Attendance System	SDG 4; SDG 9	Enhances educational monitoring with AI and computer vision (SDG 4, 9).
19R21A04N4, 19R21A04J4, 19R21A04N5, 19R21A04P4	Fire Accident Prevention with SMS Alert	SDG 3; SDG 9; SDG 11	Promotes real-time hazard detection (SDG 3), smart city safety infrastructure (SDG 11), and automation (SDG 9).
19R21A04P8, 19R21A04J7, 19R21A04M9, 19R21A04N0	Wireless Safety Check System in Amusement Parks	SDG 3; SDG 9; SDG 11	Enhances safety in public venues (SDG 3), supports IoT infrastructure (SDG 9), and promotes smart recreation (SDG 11).
19R21A04J2, 19R21A04L3, 19R21A04M6	IoT-Based Solid Waste Collection and Management	SDG 11; SDG 12; SDG 9	Improves urban sanitation (SDG 11), promotes responsible waste management (SDG 12), and uses smart embedded systems (SDG 9).
19R21A04P7, 19R21A04K1, 19R21A04M4,	IoT-Based Solid Waste Collection and Management	SDG 11; SDG 12; SDG 9	Enhances cleanliness and waste logistics in cities (SDG 11, 12) using IoT innovations (SDG 9).

19R21A04M2			
19R21A04L8, 19R21A04K8, 19R21A04L2, 19R21A04Q0	Casualty Evacuation Monitoring System	SDG 3; SDG 9; SDG 16	Supports emergency medical care and evacuation (SDG 3, 16) using real-time embedded monitoring (SDG 9).
19R21A04P3, 19R21A04P2, 19R21A04M8, 19R21A04P5	Car Accident Prevention Using Eye Blink and Alcohol Sensor	SDG 3; SDG 9	Improves road safety (SDG 3) using sensor-based embedded systems for accident prevention (SDG 9).
19R21A04L4, 19R21A04L5, 19R21A04K4, 19R21A04K6	Weather Reporting System	SDG 13; SDG 9	Promotes climate awareness (SDG 13) and uses embedded systems for real-time environmental reporting (SDG 9).
19R21A04P9	IoT-Based Smart Parking and Billing System	SDG 11; SDG 9	Enhances smart city parking efficiency (SDG 11) and promotes cashless, automated systems (SDG 9).