Department of Information Technology
Academic Year: 2024-25

Domain-wise Segregation and Thematic Mapping of Final Year Student Projects

To better understand the academic focus and technological orientation of final year students, the completed projects have been systematically segregated into broad domains such as Artificial Intelligence, Cybersecurity, Software Systems, Healthcare, IoT, and others. This classification highlights the distribution of work across core and emerging areas of Computer Science and Information Technology. Further, the projects have been mapped into categories including AI-driven systems, Core Computing, Interdisciplinary applications, and Product-oriented solutions. Such domain-wise analysis helps in identifying prevailing trends, measuring alignment with industry and research directions, and supporting outcome-based academic evaluation and curriculum planning.

Artificial Intelligence / Machine Learning / Deep Learning

- Resource Aware scheduling algorithm for Distributed ML in Heterogenous Environment
- Breaking Barriers: Understanding Blood-Brain Barrier Penetration of Drugs through Machine Learning
- Distributed Tracing using LLM
- Sound Event Detection with Hyperbolic Embedding and Labelled Audio
- Multimodal Similarity Search System
- Cancer Relapse Prediction
- Explainable AI for Improved Decision Making in Healthcare
- Video Plagiarism for Content Platforms
- Multilingual Minutes of Meeting Generator for Offline Meetings
- AI based System for Automated Classification and Organization of Construction Documents
- Context Aware Anomaly Detection in Videos
- Prompt Injection Detection in Financial Domains
- Image Preprocessing Pipeline
- Designing OCR-Based Text Extraction for Folded/Degraded Documents
- Forensic Face Sketch Construction and Recognition
- Optimized Detection of Small Objects in Aerial Imagery
- LawWise – Empowering Legal Insights using LLM

Cybersecurity / Cryptography / Blockchain

- Secure Collaboration with AES and Visual Cryptography
- Medikeep – Blockchain Based Medical Records
- Digital Ownership Authentication
- Using GANs for Intrusion Detection
- Heuristic Based Detection of XSS in Web API (Realtime)
- Secured Testaments and Will Awareness using Blockchain
- Truly Random Number Generation for Cryptographic Algorithms
- Prompt Injection Detection in Financial Domains *(also AI)*

IoT / Embedded Systems / Real-Time Systems

- Proactive Accident Detection System
- Predictive Inventory Management using IoT
- Realtime Object Detection and Emergency System
- StreetSafe

AR/VR / Graphics / Vision Systems

- 3D Game Development using AR/VR
- Forensic Face Sketch Construction and Recognition *(also AI)*
- Optimized Detection of Small Objects in Aerial Imagery *(also AI)*

Robotics / Autonomous Systems / Reinforcement Learning

- Multiagent Reinforcement Learning for Autonomous Vehicles

Software Engineering / Systems / Databases

- TASL – File Sync Utility
- Implementing Multithreaded Database
- UML Diagram Based Code Automation
- Collab Code Editor
- DB Versioning System
- Design of Adaptive OS

Web / Application Development / Information Systems

- A Unified Recruitment Hub
- Expense Analysis Pro
- Autolist
- AI Based Construction Document Organizer

Healthcare / Medical AI

- Breaking Barriers: Blood Brain Barrier Drug Prediction
- Cancer Relapse Prediction
- Explainable AI for Healthcare Decision Making
- Enhanced Gastric Cancer Detection using Deep Learning
- Medikeep – Blockchain Medical Records

Signal Processing / Audio / Speech / Assistive Tech

- Sound Event Detection with Hyperbolic Embedding
- Automatic Video Dubbing and Captioning with Voice Cloning
- Intelligent Eye Gaze Driven Keyboard for Assistive Technology
- ISL Conversion of Sign Language for Deaf-Mute

Finance / Quant / Economics

- Option Pricing Arbitrage
- Expense Analysis Pro

Data Science / Analytics / Optimization

- Resource Aware Scheduling for Distributed ML
- Context Aware Video Anomaly Detection
- Predictive Inventory Management using IoT

Defense / Strategic Systems

- TASL – AI Enhanced Military Command and Control System

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