



AAA COLLEGE OF ENGINEERING AND TECHNOLOGY

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Accredited by NBA (CIVIL, CSE, ECE, EEE & MECHANICAL), Accredited by NAAC with "A" grade
(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)

An ISO 21001:2018 Certified Institution

Amathur, Sivakasi - 626005.

(Approved Research Centre by Anna University)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

NEURAHACK – 2K25

PROBLEM STATEMENTS

(For All Departments)

Dynamic Reporting / Dashboard for SQL and NoSQL Databases

Build a platform that can connect with both SQL and NoSQL data sources and allow users to dynamically generate visual dashboards and reports without writing code. The solution should support drag-and-drop visualization, custom queries, and real-time data refresh.

Time Tracking for Remote Employees

Design a cross-platform time tracking system that monitors user activity (apps, keystrokes, mouse movement, screen time) across all major operating systems, and classifies time spent as productive or unproductive using activity analysis and intelligent categorization.

Interview Analysis System

Develop a third-party bot that can silently join online interviews and record/analyze the conversation, providing post-interview insights on candidate performance, communication skills, and panelist behavior metrics such as speaking time, sentiment, and bias detection.

Open Telemetry of Microservices Cluster

Create a centralized observability platform using OpenTelemetry standards to collect, trace, and visualize real-time communication data from a cluster of microservices, enabling developers to quickly identify performance bottlenecks and dependency issues.

Code Optimization and E2E Testing Insights

Build a system that integrates with automated end-to-end QA test suites to detect unused or redundant code paths and generate optimization reports, helping developers improve code quality and maintainability based on actual test coverage and usage.

Rank Matching Algorithm (Hire3x Context)

Design a ranking algorithm that matches candidates with job postings on Hire3x based on skills, experience, assessments, and behavioral patterns, aiming to produce an accurate match score and improve hiring decision-making

ETL E2E Automation

Build an automated ETL orchestration tool (like Gather.io) that can analyze the source and destination data models (ERDs), generate migration scripts, and provide a visual dashboard to monitor data transfers and transformation workflows end-to-end.

Video Proctoring Analysis

Develop a system to analyze recorded or live proctored exam sessions and detect cheating behavior using facial recognition, gaze tracking, audio analysis, and activity pattern recognition, classifying sessions as suspicious or clean.