Prem Kumar E

9042082274 | epremkumar24@gmail.com | https://www.linkedin.com/in/premkumar-e | https://github.com/Prem30-jr

Education

Chennai Institute of Technology, BE in Computer Science   2023 – 2027
- **CGPA:** 8.36/10.0

Experience

Software Developer Intern, Brainwave Matrix Solutions   May 2024 – Jun 2024
- Developed reusable frontend modules and integrated them with backend services through **REST APIs**, ensuring efficient data flow and reliable application performance.
- Implemented **client–server communication and asynchronous data handling**, improving application responsiveness and system stability.
- Collaborated with backend engineers using **Git-based workflows** to deliver scalable features and maintain code quality.

Projects

MemberHub (Link) | ReactJS, NodeJS, ExpressJS, MongoDB, JWT Auth, AI Analytics   Jul 2025 - Sep 2025
- Designed and developed a **subscription lifecycle management system** handling user onboarding, plan management, renewals, and revenue tracking.
- Implemented **JWT-based authentication with role-based authorization** (Admin, Staff, Member) to secure platform access.
- Built **RESTful APIs and integrated Razorpay payment gateway**, enabling automated subscription renewal and reporting workflows.

fs-init-myApp — Full Stack CLI Scaffolding Tool (Link) | NodeJS, npm, JavaScript   Oct 2025 - Dec 2025
- Developed a **globally installable Node.js CLI tool** to automate full-stack project scaffolding through a single command.
- Designed interactive command-line workflows that **automate folder structure, dependency installation, and configuration setup**, reducing project initialization time by **70–80%.**

Product Defect Detection using OpenCV (Link) | Python, OpenCV, Image Processing   Mar 2025 - May 2025
- Built an **OpenCV-based system** to enable **automated detection** of surface-level product defects using classical **computer vision techniques.**
- Applied **image preprocessing, edge detection, and contour analysis** to accurately identify defective regions.
- Optimized the detection pipeline for **fast execution with low computational overhead**, suitable for real-time inspection.

Technical Skills

Core CS Fundamentals: DSA, OOPs, DBMS, Computer Networks
Languages: Java, C++, JavaScript, SQL
Backend: Node.js, Express.js, REST APIs
Frontend: React.js, Tailwind CSS
Databases & Tools: MongoDB, MySQL, Git, GitHub, Postman, OpenCV

Achievements

Research paper titled "*An OpenCV-Based Approach for Tiny Product Defect Detection: A Novel Method for Enhanced Quality Control*" presented at **ICICC'25** held at **VCET, Madurai** with proceedings to be published by **Taylor & Francis.**

3rd Place – Tezos'24 Hackathon, Blockchain-based Shipment Tracking Solution**,** competed among **50+ teams at** Chennai Institute of Technology.

Top 10 Team – Pragyan'25, national-level technical event at **NIT Trichy,** selected among **150+ teams.**

Certifications & Specializations (Link)

ServiceNow Certified System Administrator (CSA) – ServiceNow, Jan 2026

CCNA Level 1: Introduction to Networks - Cisco | **Junior Cyber Security Analyst Badge** – Cisco

Cloud Computing Fundamentals – IBM | **AWS Solution Architecture** - Forage

Data Structure & Algorithms – Coursera, Jun 2024