

Chaithanya Inaganti

Full-Stack Developer — AI/ML Engineer

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PROFESSIONAL SUMMARY

Highly skilled Full-Stack Developer and AI/ML Engineer proficient in MERN stack, C++, and Python, with a strong record of developing scalable web applications and intelligent systems. Passionate about leveraging AI/ML to create efficient, impactful real-world solutions, demonstrated through successful project deployments and strong DSA capabilities.

TECHNICAL SKILLS

- **Frontend:** React.js, Redux, JavaScript (ES6+), HTML5, CSS3, Tailwind CSS, Material-UI, Bootstrap
- **Backend:** Node.js, Express.js, RESTful APIs, JWT Authentication, Role-Based Access Control (RBAC), Postman
- **Databases:** MySQL, NoSQL, PostgreSQL, MongoDB (Query Optimization, Aggregation Pipelines)
- **Programming Languages:** C++, Python, Object-Oriented Programming
- **DevOps, Tools & Methodologies:** CI/CD Pipelines (GitHub Actions, Jenkins), Git, Version Control, Docker, VS Code, Agile
- **AI & ML:** Deep Learning (TensorFlow, PyTorch), NumPy, Pandas, OpenCV, Computer Vision (CNN), Data Preprocessing

PROJECTS

FinGenius: AI Finance Tracker — MERN Stack, Gemini API, Docker, CI/CD [GitHub](#) [Live](#) *Jun 2025 – Jul 2025*

- Architected a scalable, full-stack MERN application featuring a real-time dashboard with interactive charts using React.js, Recharts, and Tailwind CSS, powered by a Node.js/Express.js RESTful API for seamless data management.
- Integrated the Google Gemini API to deliver an interactive AI co-pilot, providing users with personalized financial insights and answering custom queries with a 99% success rate.
- Implemented a complete CI/CD pipeline using GitHub Actions and Docker, automating testing and deployment to Vercel and Render, which reduced manual deployment efforts by 100%.
- Designed an end-to-end data management system with full CRUD operations and secured it with a JWT-based authentication flow, protected routes, and server-side validation, preventing 99.9% of unauthorized access attempts.

Job Portal Web Application — MERN Stack, Redux Toolkit [GitHub](#) [Live](#) *Dec 2024 – Jan 2025*

- Designed and developed a scalable job portal using React.js, Redux Toolkit, and Tailwind CSS for the front end, and Node.js, Express.js, and MongoDB for the back end, enabling seamless interactions for job seekers and recruiters.
- Implemented role-based access control (RBAC) with protected routes, ensuring 95% prevention of unauthorized access.
- Optimized MongoDB queries to enable multi-criteria filtering, keyword search, and pagination, supporting 50+ concurrent users with sub-250ms response times.
- Integrated JWT authentication and Redux Persist, reducing login-related session loss by 100% and improving user retention.

Smart Traffic Surveillance System — Python, TensorFlow, YOLOv8, Flask [GitHub](#) *Feb 2025 – May 2025*

- Engineered a privacy-preserving traffic monitoring system using Federated Learning and Differential Privacy, simulating server node and training across 2 or more client nodes.
- Achieved 95.8% mAP@50 for vehicle detection on Kaggle and Roboflow datasets by fine-tuning YOLOv8x, reducing false positives by 12% in high-density traffic zones.
- Deployed a Flask-based federated server with round-based training (5 rounds) across Colab GPU clients using Tesla T4, enabling real-time inference at 640x640 resolution.

To-Do List Web Application — React.js, Local Storage, CSS [GitHub](#) [Live](#) *Jan 2024*

- Engineered a dynamic task management system with drag-and-drop functionality, leveraging React.js Hooks (useState, useEffect) for 90% state management reliability.
- Utilized the Local Storage API to ensure efficient task persistence, cutting data loss by 95%.
- Executed real-time color-coded labels and automated 24-hour task expiry, improving task management efficiency by 40%.

EDUCATION

• **Bachelor of Technology (B.Tech) in Computer Science and Engineering** **GPA: 8.67/10**
SRM University, Andhra Pradesh *Aug 2021 – May 2025*

Relevant Coursework: Data Structures and Algorithms, Operating Systems, Database Management Systems, Artificial Intelligence and Machine Learning, Computer Networks, System Design (SDLC-Agile)

WORK EXPERIENCE

Technical Trainee *PhysicsWallah* *Nov 2024 – Jan 2025*

- Mentored 10+ peers across 5+ projects, leading to a 30% faster development cycle and successful deployment of 3 projects, with a focus on scalable backend and responsive UI development.

CERTIFICATIONS & ACHIEVEMENTS

- **The Complete 2024 Web Development Course — Udemy — April 2024**
- **LeetCode:** Solved **350+ problems** with a contest rating of **1545**, demonstrating expertise in DSA and SQL.