

Yuvin Raja

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EDUCATION

Vellore Institute of Technology

Bachelor of Technology in Computer Science and Engineering

- Cumulative GPA: 9.3/10

Vellore, Tamil Nadu

Sep 2022 – Present

WORK EXPERIENCE

Web Development Intern

Voltaero Technologies Pvt. Ltd.

June 2025 – Present

Vellore, Tamil Nadu

- Launched a company website to showcase drone innovations and robotics, enhancing visibility among stakeholders.
- Developed a responsive UI with dynamic routing and real-time updates using Next.js (App Router) and Tailwind.
- Integrated Sanity CMS, enabling non-technical staff to update blogs and team pages without developer intervention.
- Configured Resend API for contact forms, streamlining real-time communication with investors and collaborators.

AI Chatbot Intern

Fundle AI

May 2025 – July 2025

New Delhi, Delhi

- Engineered core chatbot features on WhatsApp to redeem loyalty points, improving user engagement for 3+ malls.
- Boosted scalability and maintainability by rewriting the webhook backend from PHP to Python, reducing latency.
- Reduced cloud OCR costs by 60% by integrating Oracle Document Understanding in place of Google Document AI.
- Collaborated with product team to customize chatbot logic for 5+ malls, aligning reward rules with loyalty programs.

TECHNICAL TEAMS

Autonomous Systems Engineer

Team Ojas Racing (VIT Formula Student Electric Team)

April 2024 – Present

- Led a 4-member sub-team to design and implement an autonomous driving software stack for a self-driving race car.
- Architected a ROS2 + Gazebo simulation framework supporting cone detection, SLAM, and global path planning.
- Trained and implemented a stereo vision cone detection model using 1,500+ labeled samples curated via Roboflow.
- Achieved 97% cone classification accuracy in simulation by optimizing the vision pipeline for latency on Jetson Orin.

PROJECTS

InvoiceGST | Next.js, Tailwind CSS, Express.js, PostgreSQL, Prisma

- Built a GST-compliant invoicing platform used by early-stage startups to generate, manage, and export invoices.
- Created REST APIs (auth, invoice CRUD, analytics) using Express.js, JWT, and Prisma, handling 1K+ records.
- Developed adaptive forms with conditional rendering based on invoice type and tax rules, reducing errors by 25%.
- Leveraged React Hook Form with Zod validation, enabling real-time error handling and 25% faster invoice generation.
- Implemented a PDF generation feature with brand elements, tax compliance fields, and formatted totals in words.

Forged Image Detector | Streamlit, Keras, OpenCV, NumPy, PIL

- Trained a custom CNN on the 5K-image CASIA2 dataset to detect image forgeries, achieving 93.6% test accuracy.
- Applied ELA preprocessing to boost sensitivity to forged regions, improving precision by 6% over baseline.
- Built a modular DL pipeline that reduced preprocessing time by 40% through augmentation and denoising.
- Deployed a Streamlit app for image upload, ELA preview, and real-time classification with confidence scores.
- Integrated Hugging Face Hub for hosting a CNN model, reducing load times by 60% via optimized download caching.

TECHNICAL SKILLS

Languages: Java, C, C++, JavaScript, TypeScript, Python

Frameworks: Next.js, React.js, Tailwind CSS, shadcn/ui, Express.js, Node.js, REST APIs

Database & Tools: PostgreSQL, Prisma ORM, MySQL, Git, GitHub, Postman, Visual Studio Code, Zod, Jest

Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming, Operating Systems, Computer Networks, Database Management Systems, Artificial Intelligence