

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

Sept 2022 – Present

WORK EXPERIENCE

Web Development Intern

Voltaero Technologies Pvt. Ltd.

June 2025 – Present

Vellore, Tamil Nadu

- Launched a company website to showcase drone projects and robotics research to investors and collaborators.
- 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

- Developing the autonomous software stack for a driverless electric racecar competing in Formula Student events.
- Built a ROS2 + Gazebo simulation stack for cone detection, SLAM, and path planning on a scaled driverless replica.
- Implemented real-time perception pipeline using stereo vision, trained and custom cone dataset labeled via Roboflow.
- Deployed perception and planning stack on Jetson Orin Nano with real-time integration of IMUs and wheel encoders.

PROJECTS

GST Invoice Platform | Next.js, Tailwind CSS, Express.js, PostgreSQL, Prisma

- Designed a full-featured invoicing platform used by early-stage startups to generate, manage, and export invoices.
- Developed secure RESTful APIs for authentication, invoice CRUD, and analytics using Express.js and JWT.
- Developed a PDF generation feature with brand elements, tax compliance fields, and formatted totals in words.
- Leveraged React Hook Form with Zod validation, enabling real-time error handling and 25% faster invoice generation.
- Built dynamic invoice creation forms with conditional logic tailored to invoice type, tax rules and client metadata.

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

- Trained a custom CNN on the CASIA2 dataset to detect image forgeries, achieving 93.6% test accuracy.
- Applied Error Level Analysis (ELA) preprocessing to enhance pixel-level anomalies and model sensitivity.
- Built a modular deep learning pipeline with automated denoising, data augmentation, and preprocessing.
- Deployed a Streamlit app for image upload, ELA preview, and real-time classification with confidence scores.
- Integrated Hugging Face Hub for cloud-based model hosting and efficient downloads in the app.

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