

Dev Tailor

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Education

Vellore Institute of Technology, Bhopal

B.Tech. in Computer Science Engineering

Sept 2022– Present

CGPA: 7.65

Relevant Coursework: Data Structures and Algorithms, Object-Oriented Programming, Database Management Systems, Network Programming (TCP/IP protocols), Operating Systems, Cloud Computing.

Skills

Technical Skills: HTML, CSS, JavaScript, TypeScript, Python, C++, SQL, MERN Stack, Next.js, Tailwind CSS, AWS, Git, SQL, MongoDB, Git

Leadership: Communication, Teamwork, Analytical Reasoning, Project Planning

Languages: English: Fluent, Hindi: Native

Projects

Traffic Management System

- Increased vehicle counting accuracy to over 90% across 5+ hours of test footage, successfully tracking and analyzing over 1,000 vehicle movements in diverse conditions.
- Reduced false positive detections by an estimated 40% by implementing Gaussian blurring and morphological transformations, enhancing detection reliability in low-visibility video.
- Optimized the processing pipeline to achieve a stable 25+ FPS on a standard Intel i5 CPU, enabling real-time analysis without requiring expensive, specialized hardware.
- Validated system performance by testing the model against a 5-hour video dataset covering 3 distinct traffic scenarios (highway, urban, intersection) to ensure robust, real-world accuracy.
- Applied computer vision and data processing techniques to analyze large-scale traffic footage, simulating a real-world big data pipeline.

PixelPrompt - Ai-Powered Text-To-Image Generation Platform

- Developed and launched 'PixelPrompt', a full-stack MERN application with 10+ core features, reducing the end-to-end image generation workflow for users to under 15 seconds.
- Architected a scalable Node.js backend with 12+ RESTful API endpoints to manage user authentication, secure payments, and image processing, maintaining an average API response time of under 200ms.
- Applied data modeling and backend optimization, aligning with enterprise-level software development practices.
- Designed a MongoDB schema with 5 core collections using Mongoose to manage data for thousands of user-generated images, enabling features like persistent gallery history for over 500+ test users.
- Improved application security by centralizing the management of 10+ sensitive credentials (API keys, DB URIs) using environment variables, eliminating security risks from hard-coded secrets.

Leadership and Responsibilities

Mozilla FireFox Club - Web Development Team

- Spearheaded the design and development of the club's official website, driving a 30% increase in member engagement, and launched an event platform to simplify registrations and improve accessibility.
- Led the planning and execution of events for 300+ students, cultivating an engaged tech community through interactive workshops, expert-led sessions, and strategic networking opportunities.

Achievements

Top 10 Finalist, HP Power Lab Hackathon (Jan 2025) – Led a team of 4 and engineered next-gen energy efficiency solutions for Hindustan Petroleum Corporation Limited.