JAY PRAKASH VALECHA

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EDUCATION

Bachelor of Technology(B.Tech) with Honours, Jabalpur Engineering College   2021-2025
CGPA - 7.33

Intermediate(XII), Aditya Convent School   2019-2020
Grade - 92%

High School(X), Aditya Convent School   2017-2018
Grade - 84.2%

SKILLS

Languages:	C, C++, JavaScript
Libraries and Frameworks:	Node.js, Express.js, Mongoose, Sequelize CLI, OpenCV
Database:	PostgreSQL, MySQL, MongoDB
Developer Tools:	Git, GitHub, VS Code, Docker, Nginx

EXPERIENCE

Intern   February 2025 - April 2025
Tata Consultancy Services   *India, Remote*

– Developed and implemented a template matching system using **OpenCV** to detect and verify objects within images for a real-time automotive cockpit system.

– Researched and gained knowledge of **Infotainment Systems**, **Android Automotive OS (AAOS)**, and **In-Vehicle Infotainment (IVI)**, contributing to a deeper understanding of automotive digital cockpit technologies.

– Validated and optimized image processing workflows, improving the efficiency of template matching through color and size checks.

– GitHub Repository: github.com/JPV2207/OpenCV-Template-Matching

PROJECTS

Event Finder (Try It Here)

– Built a **microservice-based event system** using **Node.js**, **Express.js**, and **MongoDB** with separate services for users, events, and organizers, secured with **JWT authentication** and **role-based access control (RBAC)**.

– Used **Nginx as an API Gateway** in the microservice setup to route requests between services and added features like event creation, likes, comments, organizer approval, and event search with filters.

– Integrated the **LocationIQ API** to get the city from an event address and stored it in the database for accurate **city-based event search**.

Wealth Monitor (Try It Here)

– Implemented user authentication for the project using **Node.js**, **Express.js**, and **MySQL** as part of a minor project.

– Developed a secure **Forgot Password** feature, enabling users to reset their passwords via email.

Quantumbot (Try It Here)

– Developed a **Messenger Backend Chatbot** for a company using **Node.js**, **Express.js**, and the **Firestore Admin SDK**.

– Enabled real-time chatbot responses with **Google's Gemini API**, enhancing user engagement.

– Implemented speech recognition using the **Web Speech API** for a more natural user experience.