

# PURAV MALIK

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## Education

### BML Munjal University

Bachelor of Technology in Computer Science - CGPA 8.04

Sep. 2022 – Present

Gurugram, Haryana

## Technical Skills

**Languages:** JavaScript, Python, C++, SQL, HTML/CSS, Markdown, MATLAB, R

**Developer Tools:** VS Code, GitHub, Google Cloud Platform, AWS, Azure, Docker, Postman, MongoDB Atlas

**Technologies/Frameworks:** ReactJS, Node.js, Express.js, Google OR-Tools, Folium, OSRM API, Razorpay API, Squid Proxy, Pi-hole, FastAPI, Flask

## Experience

### Coding Bits

June 2024 – July 2024

Web Developer Intern

Delhi

- Developed a full-stack web application using React.js, Node.js, Express.js, and MongoDB.
- Gained hands-on experience in frontend and backend development, API integration, and database management.
- Built and optimized responsive user interfaces to enhance user experience.

### Projects

#### Pro-Active AI Assistant | Python, Artificial Intelligence, LLMs, Google Cloud Console

GitHub

July 2025

- Built an **autonomous AI agent** using **Google Gemini 1.5 LLM** with **multi-turn conversational abilities**, enabling context-aware and proactive assistance.
- Integrated **Google Places API** to fetch real-time restaurant details (location, cuisine, ratings) and **Google Calendar API** to check availability, schedule events, and send invites automatically.
- Enabled users to **plan team dinners end-to-end**: from restaurant discovery → scheduling → sending calendar invites, all through natural language interaction.
- Designed intelligent workflow orchestration that decomposes high-level user goals into actionable steps, coordinating APIs and conversations seamlessly.

#### TOMATO – FOOD ORDERING WEBSITE | Full Stack Development (MERN, Razorpay)

GitHub

June 2024

- Developed a full-stack food ordering platform using **ReactJS, Node.js, Express, MongoDB, and Razorpay**.
- Implemented a user-friendly interface for placing orders and an **admin panel** for managing orders, addresses, and payment confirmations.
- Integrated **Razorpay** for secure online payments and optimized the backend for seamless order processing.

#### SMART WASTE ROUTE OPTIMIZER | Python, Google OR-Tools, GIS

December 2024

- Engineered an intelligent routing system using **Google OR-Tools** to solve the **Capacitated Vehicle Routing Problem (CVRP)** with real-world distances from the **OSRM API**.
- Simulated daily truck routes for **15+ bins over a 7-day cycle**, factoring in bin weight, geolocation, and collection frequency.
- Reduced total travel distance vs. naive strategies, improving cost-efficiency and operational planning.
- Generated **interactive Folium maps** to visualize optimized routes, enabling data-driven decision-making for waste management.

#### AD-FREE PROXY SERVER | Networking & Security (Squid, Pi-hole, Ngrok)

January 2025

- Built a secure proxy server with **ad-blocking, caching, and monitoring** using **Squid Proxy, Pi-hole, and Docker**.
- Configured **Ngrok tunneling** for remote access and automated URL updates with a **Discord notification bot**.
- Deployed services as background processes via **systemd**, ensuring high availability and seamless operation.
- Enhanced user privacy and browsing performance by blocking intrusive ads and optimizing network requests.

## Leadership / Extracurricular

- Smart India Hackathon 2024 (College Round):** Won 1st place, outperforming 40+ teams with an innovative tech solution.
- Operations Lead – Smart India Hackathon & Hacked 2.0 (Dec 2023, Feb 2024):** Managed logistics, coordination, and resources for 350+ participants, ensuring smooth event execution and stakeholder communication.
- Won 20+ medals in Karate Championship and Powerlifting.