Mahesh Rakte

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Summary

Computer Engineering undergraduate with strong Python software engineering skills, a solid grounding in data structures and algorithms, and hands-on experience designing and consuming RESTful APIs. Practical experience with containerized deployments (Docker), serverless/distributed backend systems (Supabase Edge Functions, Realtime sync), and applied ML/NLP through Gemini API integrations. Active open-source contributor and hackathon winner with a track record of shipping full-stack, production-deployed projects independently.

Technical Skills

Languages: Python, JavaScript, TypeScript, SQL, HTML/CSS

Core CS: Data Structures, Algorithms, Database Management, Machine Learning

APIs & Backend: RESTful API design & development, Node.js, Express.js, Flask, Edge Functions (serverless)

AI/ML & NLP: Generative AI, Gemini API, AI Agents, Retrieval-Augmented Generation (RAG), Prompt Engineering, Machine Learning, Computer Vision, TensorFlow, Pandas, NumPy

Systems & Infra: Docker (containers), Git, GitHub, distributed/realtime data sync (Supabase Realtime), offline-first architecture

Databases: PostgreSQL, MongoDB, Supabase, MySQL, Row-Level Security (RLS)

Frontend: React.js, Next.js, Tailwind CSS, Bootstrap, PWA Development

Cloud & Other Tools: AWS, Cloudinary, Tableau, Aptos Blockchain

Experience

Data Science Intern **Nov. 2024 – Dec. 2024**

Unified Mentor | Remote

- Performed exploratory data analysis (EDA) and statistical analysis on datasets with 100K+ records using Python (Pandas), identifying key trends and patterns
- Built data preprocessing pipelines in Python to clean and transform raw data for machine learning models
- Developed interactive dashboards using Python (Plotly, Pandas) to visualize complex datasets, improving data interpretation efficiency by 40%
- Created data visualizations in Tableau presenting actionable insights from large-scale analysis
- Collaborated with cross-functional teams to deliver data-driven recommendations for business strategy optimization

Open Source & Community

- Open Source Contributor: Contributed to open-source projects on GitHub, improving code quality and documentation through issue triage and pull requests
- GDG Build and Grow Hackathon 2.0 – Winner: Built and shipped a full-stack AI-powered solution under time constraints, competing against multiple teams
- Technical Workshop Leader: Organized a hackathon and led workshops on web development and data science for 50+ students; led a winning hackathon team
- Community Builder: Co-founded OG Tech Minds, growing it to 200+ active members through regular technical events and workshops

Projects

Farmline – AI Agricultural Ecosystem **2025**

React 19, TypeScript, Supabase, Gemini AI, PWA | farmline.works

- Built a full-stack platform with 12+ serverless Edge Functions and REST-based service integration — winner at GDG Build and Grow Hackathon 2.0
- Integrated 9 Gemini-powered AI features, including vision-based image classification and multilingual NLP search (English/Hindi/Hinglish)
- Engineered an offline-first architecture with local caching (IndexedDB/Dexie.js) and background auto-sync for reliability in low-connectivity conditions

- Implemented real-time data sync at scale using Supabase Realtime for live GPS tracking and multi-user coordination
- Designed a multi-role RBAC system with PostgreSQL Row-Level Security policies across 6 distinct user roles

AI Memory Vault **2025**

React, TypeScript, Supabase, Gemini API, Chrome Extension (MV3) | contextbridge.vercel.app

- Built a cross-platform system (Chrome Extension + Web Dashboard) using a custom DOM-based data capture layer supporting 6+ external platforms
- Integrated the Gemini API for automated NLP-based conversation analysis and summarization
- Implemented an offline-first sync architecture with conflict resolution and a request queue for reliable distributed data consistency
- Designed the backend schema with Row-Level Security policies and serverless Edge Functions

TerritoryFit – Gamified Fitness Territory Platform **2026**

React 18, TypeScript, Leaflet, Supabase, Capacitor

- Built real-time territory-capture algorithms and leaderboard systems backed by a PostgreSQL and Supabase Realtime backend supporting scalable multiplayer interactions
- Deployed as a cross-platform mobile app using Capacitor with offline functionality and background location tracking

Education

Bachelor of Technology in Computer Engineering **Sept. 2024 – Dec. 2028**

TSSM's Bhivarabai Sawant College of Engineering & Research | Pune, India | GPA: 8.55

- Relevant Coursework: Data Structures, Algorithms, Database Management, Machine Learning