

HEET MEHTA

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SUMMARY

Aspiring software engineer with a strong foundation in full-stack development, machine learning, and data analytics. Proficient in designing scalable systems, building interactive user interfaces, and deploying cloud-based applications. Experienced with technologies such as Python, JavaScript, React.js, FastAPI, Kafka, and AWS. Adept at working across the software stack to develop efficient, reliable, and user-focused solutions.

EDUCATION

New York University, Tandon School of Engineering Masters in Computer Science Relevant Courses: Software Engineering, Design & Analysis of Algorithms, Machine Learning	September 2025-May 2027 (Expected) <i>Brooklyn, New York</i>
Vellore Institute of Technology Bachelor of Technology in Information Technology GPA: 9.14/10	September 2021-June 2025 <i>Tamil Nadu, India</i>

EXPERIENCE

Bhabha Atomic Research Centre (BARC) <i>Project Intern</i> <ul style="list-style-type: none">Built and deployed a BLE-driven real-time visitor monitoring solution using Python, BlueZ, and multithreaded socket programming to monitor and detect up to 500 Bluetooth devices in real time.Implemented RSSI-based trilateration algorithms for accurate indoor positioning, leveraging NumPy, SciPy, and Kalman filtering to achieve 1-meter localization accuracy.	December 2024-May 2025 <i>Mumbai, India</i>
Encardio Rite <i>Software Development Intern</i> <ul style="list-style-type: none">Collaborated with cross-functional teams to build a machine learning-powered infrastructure diagnostics tool using Python, Scikit-learn, and AWS Lambda, enhancing the safety and reliability of bridges, tunnels, and dams. This reduced critical infrastructure failures by 40%.Integrated and streamed sensor data from more than 20 geotechnical monitoring systems via MQTT and AWS IoT Core, with real-time dashboards using Plotly, D3.js, and CloudWatch for structural health monitoring.	May 2024 - August 2024 <i>Lucknow, India</i>

PROJECTS

SentryFlow - Real-Time API Rate Limiting & Usage Analytics <ul style="list-style-type: none">Built a production-grade platform using FastAPI, Redis, Kafka, and ClickHouse to enforce dynamic rate limiting and collect API usage metrics at scale.Designed token bucket and sliding window algorithms with JWT-based authentication, API key provisioning, and streaming event ingestion pipeline.Developed a performant frontend with React.js, Tailwind CSS, and Chart.js to visualize live API usage and quota exhaustion for developers.
InsightBoard - B2B Product Telemetry & Funnel Analytics Platform <ul style="list-style-type: none">Engineered a Mixpanel-style analytics system to track feature usage, retention, and engagement using React, React DnD, Zustand, and custom dashboard builders.Developed a lightweight JavaScript SDK for event batching and offline persistence, integrated with a FastAPI backend and PostgreSQL for metadata storage.Enabled high-speed querying of time-series data via ClickHouse, with Kafka consumers for ETL and role-based access using Firebase Auth.

PUBLICATIONS

Journal Name: IEEE Xplore
Paper Title: Applications of Machine Learning in Detecting Unethical Sources of Raw Materials in Supply Chains in the Cosmetic Industry
Issue: 4th International Conference on Sustainable Expert Systems (ICSSES 2024)

SKILLS

Languages	Python, Java, JavaScript, TypeScript, C, C++, SQL
Libraries/Frameworks	FastAPI, React.js, Zustand, React DnD, Scikit-learn, Pandas, Chart.js, Tailwind CSS
Tools & Platforms	Docker, Kafka, Redis, ClickHouse, PostgreSQL, Git, Firebase, Postman, VS Code
DevOps & Cloud	AWS (Lambda, IoT Core, CloudWatch), GitHub Actions, Google Cloud
Software & Utilities	Microsoft Office, Google Suite, Xcode, LaTeX
Domains	Full-Stack Development, Data Pipelines, System Design, Developer Tooling, Product Analytics, API Management, Machine Learning