Akshit Mehta

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Education

Maharaja Agrasen Institute of Technology (MAIT) *Delhi*
Guru Gobind Singh Indraprastha University (GGSIPU) *Expected 2027*
Bachelor of Technology in Information Technology, CGPA 9.30
Relevant Coursework: DSA, DBMS, OOP, Machine Learning, Statistics, Software Engineering

Indian Institute of Technology Madras *Chennai*
BS in Data Science and Applications, Diploma Level, CGPA 8.93 *Expected 2027*

Guru Tegh Bahadur Public School *Meerut*
Class 12th: 97%, Class 10th: 97% *2023*

Work Experience

Stellantis Technology Centre India Pvt. Ltd. *India*
Software Engineering Intern *October 2026 – Present*

- Working on **software virtualization** using **QEMU** and related tooling.
- Automating virtualization workflows with **Python** scripts that drive **QEMU**.

OTET Infosystems *Remote*
Backend Developer Intern *June – July 2025*

- Led **Laravel-to-Django** migration design, converting legacy routes, controllers, jobs, Eloquent models, and request flows into **Django/DRF** architecture.
- De-risked OTP and admin auth, Firebase, Razorpay, push notifications, sessions, and password resets via risk documentation.
- Built a DRF migration scaffold with user models, serializers, viewsets, JWT patterns, and Faker-based local data validation.

Projects

Cortex (RAG Codebase Companion) *github.com/BriskAM/cortex*
Vue 3, Flask, Celery, Redis, ChromaDB, gemini-embedding, Gemma

- Built a deployed RAG developer tool that indexes GitHub repositories, source code, pull requests, merge notes, and diff summaries for natural-language codebase Q&A.
- Engineered asynchronous ingestion with **Celery**, **Redis**, and **ChromaDB**; used **tree-sitter** for AST-aware class and method boundary chunking.
- Implemented **Server-Sent Events** streaming APIs, reranking, and retry backoff for Gemini/Gemma queries while handling HTTP 429 rate limits.
- Reduced worker RAM usage from **500MB+** to **under 150MB** for a 512MB VPS and accelerated CI image builds by **6.3x**.

Live Company Check (Human-in-the-Loop AI Agent) – *in progress* *github.com/BriskAM/live-company-check*
FastAPI, LangGraph, Temporal, PostgreSQL, Next.js, Gemini, Recharts

- Built an AI agent that checks a company's records, customer reviews, and news live while a reviewer answers its questions, pauses it, and sends feedback; orchestrated with **LangGraph** and **Temporal**.
- Designed a general **chart tool** (line, bar, area; week to year; up to four series) where the model only describes what to plot and code computes every figure, so rating trends and company comparisons never contain invented numbers.
- Streamed an append-only **PostgreSQL** event log over **Server-Sent Events** to a **Next.js** UI that replays identical state on reload; evidence exclusions automatically redraw charts and findings.
- Verified with **52** backend tests and a **26-check** live scenario suite covering similar company names, rate limits, and reviewer feedback.

BehaveGuard (Behavioral Biometrics) *mkgstf/behaveguard*
FastAPI, PyTorch, Next.js, scikit-learn, LSTM, Temporal Convolutional Networks (TCN) *github.com/BriskAM/behave-guard*

- Built a continuous authentication system fusing **One-Class SVM**, **LSTM Autoencoder**, and **TCN Autoencoder** models, achieving **91%–93%** genuine verification and zero false acceptances in impostor testing.
- Extracted 23-dimensional keystroke timing features and 7-dimensional mouse kinematic features for speed-scale invariant biometric verification.
- Engineered score fusion across keyboard and mouse signals with **under 50 ms** inference per sequence window and built a **FastAPI**/**Next.js** testing sandbox.
- Supported enrollment, verification, identification, and live authentication workflows with SQLite-backed profile storage.

Technical Skills

Languages: Python, Java, Go, SQL, TypeScript, JavaScript, HTML/CSS, Bash
Backend & Libraries: FastAPI, Flask, Django REST Framework, REST APIs, Celery, Redis, SQLAlchemy, Pytest, Pandas, NumPy
AI & Machine Learning: PyTorch, scikit-learn, torchvision, GANs, CNNs, LSTMs, TCNs, RAG, LLMs, Embeddings, PCA
Cloud & DevOps: AWS (EC2, S3), Docker, Docker Compose, CI/CD (GitHub Actions), Linux, QEMU (virtualization), Git, Postman, Nginx
Databases & Vector Search: PostgreSQL, MySQL, SQLite, MongoDB, ChromaDB, Vector Search

Certifications & Achievements

- **Diploma in Programming** – IIT Madras BS Degree Programme.
- **JetBrains Academy**: Python Developer (265 topics, 10 projects) and SQL for Data Analysis certifications.
- **Open Source**: Maintained IIT Madras academic tooling repositories (100+ combined GitHub stars); Hacktoberfest contributor.
- **ML Competitions**: Top-5 in Movie Review Sentiment Classification; top 6–7% in plant super-resolution and hotel cancellation prediction.
- **Leadership & Awards**: DevOps Head – GDG MAIT; IIT Madras Paradox'24 finalist; 2nd place Redrob Hackathon (INR 20,000).