Shweta Madhale

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Education

Stevens Institute of Technology   **Sept. 2022 – May 2024**
Master of Science in Computer Science   *Hoboken, New Jersey*

University of Mumbai   **Aug. 2018 – May 2022**
Bachelor of Engineering in Electronics and Telecommunication   *Mumbai, India*

Experience

Bright Mind Enrichment and Schooling (BME)   **Aug. 2024 - Present**
Software Engineer (Volunteer)   *Remote*
- Enhance UI/UX and responsiveness of the Street Care, Vaccination Rewards, and BME website and app, supporting outreach to 1,500+ homeless individuals and 2,300+ mentees across a 67M+ reach
- Integrate Firebase/Firestore with Android and iOS apps enabling real-time volunteer tracking, bilingual support, and geofencing for local community aid

Levicon Systems Pvt Ltd   **May 2022 – July 2022**
Software Engineer Intern   *Mumbai, India*
- Implemented dynamic charts to visualize trends, comparisons, and anomalies in energy usage; connected dashboard to backend APIs to fetch and update data from IoT devices
- Improved user engagement by 13% with a responsive web dashboard to visualize real-time energy consumption data

SIES GST - Google Developer Student Clubs   **July 2021 – May 2022**
Machine Learning & Artificial Intelligence Coordinator   *Mumbai, India*
- Conducted ML/AI workshops for 200+ students; mentored 75+ students in '30 Days of Google Cloud 2021'
- Reduced support queries by 29% on SIES GDSC website by building a FAQ chatbot with a 5 member team

Academic Projects

Cloud Microservices Migration | *AWS, Node.js, CI/CD, MySQL, Docker*   **Mar. 2024 - May 2024**
- Refactored a monolithic Node.js web application into scalable, containerized microservices using Docker and ECS Fargate; deployed in simulated AWS lab with ALB, target groups, and custom VPCs
- Built 2 CI/CD pipelines with blue/green deployment, enabling zero downtime updates and scalable service rollouts

Symptom Mapping in Vaccine Adverse Events Reports | *Python, NLP, Pandas*   **Oct. 2023 - Nov. 2023**
- Developed NLP pipeline to map layperson reported symptoms in 1M+ VAERS records to standarized medical terms using biomedical NER/token classifier model and word embeddings
- Achieved 15.6% improvement in accuracy using FastText despite limitations from LLM generated ground truth data

Handwritten Math Equation Recognition | *Python, CNN, LSTM, Apps Script*   **Jan. 2022 - May. 2022**
- Led 3 person team and built data collection pipeline to generate 137K+ labeled samples from tokenized collected inputs
- Delivered 90.78% accuracy on HME recognition with CNN-LSTM architecture, layer tuning and batch normalization

Personal Projects

GrocerIQ - Smart Grocery Planner | *React, Express, Node.js, MongoDB, JavaScript, Clerk, LLM*   **Present**
- Simplify grocery planning by building full-stack MERN app with secure user authentication and responsive UI
- Design AI driven features that generate tailored shopping lists, optimize restocking, and cut down on food waste

LLM Based PDF Query Assistant | *Python, StreamLit, NLP, HuggingFace, FAISS*   **Jan. 2024**
- Created a chatbot supporting queries across upto 100MB of PDF content with fast and accurate information retrieval
- Achieved 83.21% response accuracy combining large instruction-tuned model with vector search and context handling

Archive - Notes App | *Java, Android, Firebase*   **Aug. 2023 - Sept. 2023**
- Devised real time note taking Android app; tested with 50+ users contributing 100+ notes via shared APK distribution
- Designed to scale efficiently to 10,000+ users and 100,000+ notes while supporting media embeds and real-time syncing

Technical Skills

Languages & Frameworks: JavaScript, TypeScript, Python, Java, C++, SQL, React, Node.js, Express, Flask, HTML/CSS
Tools, Databases, & Platforms: Git, Docker, Firebase, MongoDB, MySQL, PostgreSQL, Android Studio
Cloud, Databases and Concepts: AWS (ECS, EC2, RDS, VPC, ALB), GCP, REST APIs, CI/CD, Agile, Microservices