

SASHIDHAR MOTTE

Buffalo, New York

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SUMMARY

Full-stack engineer who builds data-heavy dashboards people rely on daily, and owns everything under them. I built and ran the internal platform a support team used for 10–15K queries a day, from the React interface down to the APIs, auth, and payments, and I like driving projects without waiting for perfect clarity.

EXPERIENCE

Aspora (YC W22)

November 2023 – November 2024

Full Stack Engineer

Bangalore

- **Data-Rich Dashboard (Alphadesk)**: Built and owned an internal dashboard end to end, **React/TypeScript** interface plus backend APIs, that the CX team uses daily to handle customer issues, **payments**, and **KYC/authentication**, serving **10–15K queries/day**.
- **Observability & Data Visualization**: Built **SQL** and **Mixpanel** dashboards making large-scale product data intuitive, surfacing KPIs, funnel conversion, and latency so teams could act on them.

University at Buffalo

October 2025 - Present

Research Assistant - Software/AI Engineer

Buffalo, NY

- **Custom Text Encoder Training**: Trained a lightweight text encoder on synthetically generated data from photo metadata, improving search recall from **62% to 92%** on a personal photo dataset.
- **On-Device ML Pipeline**: Ran the full search pipeline on device under **6MB** via quantization and a hybrid cloud-device sync strategy, keeping the interface fast under real constraints.
- **Knowledge Graph for Memory Surfacing**: Explored knowledge graphs to automatically surface interesting photo memories, connecting people, places, and activities across a gallery.

PROJECTS

Agentic LLM: Tool Use, RAG & Evaluation | Python, PyTorch, SmolLM2

- Built an agentic LLM system with tool use and a hybrid RAG pipeline (e5-base-v2) that decides when to fetch evidence before acting, grounding outputs and cutting hallucination.
- Improved accuracy 3.3x (12% to 40%+) via GRPO fine-tuning implemented from scratch (no critic network).
- Designed the evaluation framework to measure output quality and catch regressions.

DarkWatch: Data-Heavy Observability Dashboard | React, TypeScript, FastAPI, Python

- Designed and built a **React** dashboard with complex data visualization, including an interactive 3D before/after globe that makes large-scale change data intuitive at a glance.
- Owned the full stack behind it: the **FastAPI** API, the data-processing pipeline, and deployment, taking the product from raw data to production.
- Trained a **Siamese ResNet + UNet** model (F1 0.59 to 0.80, +35%) and evaluated it on 7,120 labeled samples to validate the results the dashboard surfaces.

TECHNICAL SKILLS

AI & Agents: LLMs, Agentic Workflows, RAG, Tool Use, Evaluation, AI Coding Tools, PyTorch, HuggingFace

Full-Stack & Data: Node.js, Express, FastAPI, Java/Spring Boot, REST API Design, PostgreSQL, MongoDB, Redis, Authentication, Data Modeling

Infra: AWS, Docker, CI/CD, Git, Linux

Observability: Dashboards, Analytics, Mixpanel, SQL/Metabase, Monitoring, Performance

Frontend: React, Next.js, TypeScript, Redux, TailwindCSS, Vite, Rollup, Tauri, Complex UI, Data Visualization, Responsive/Accessible UI

EDUCATION

State University of New York, Buffalo

2025 – 2026

MS CS(AI/ML) - CGPA - 3.8/4

Buffalo, New York

Indian Institute of Information Technology, Sri City

2019 – 2023

B. Tech. (CSE) - CGPA - 8/10

Sricity, India