

# Sneha Hassan

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## EDUCATION

### Carnegie Mellon University

Master of Science in Engineering & Technology Innovation Management | Software and Data Focus (GPA: 3.77/4)

Jan 2025 – Dec 2025

Pittsburgh, PA

### APJ Abdul Kalam Technological University

Bachelor of Technology in Computer Science (GPA: 3.94/4)

Aug 2019 – May 2023

Kerala, India

## EXPERIENCE

### Ather Energy Ltd. (EV Scooter Company)

Oct 2023 – Nov 2024

#### Software Developer

Bangalore, India

- Architected a B2B fleet monitoring dashboard with real-time IoT telemetry (remote immobilizer, GPS, diagnostics) using React and Firebase, adopted by 3 enterprise clients managing 200+ vehicles
- Engineered and shipped a full-stack PWA using Spring Boot (Java) and **React Native** for carbon-footprint tracking, serving 50K+ DAU and reducing end-to-end tracking latency by 25% through API response caching
- Trained and deployed an ML pothole detection model (92% accuracy) using Python signal processing on accelerometer data, driving a 35% increase in safety-feature adoption across the rider base
- Owned a cross-team test automation platform using **Java and Flutter**, increasing automated test coverage from 32% to 78% and cutting QA cycle time by 45% across 4 engineering squads
- Streamlined 12 legacy Firebase Cloud Functions(Node.js) and built **custom SQL automation** scripts, reducing average API response time by 20% and data processing overhead by 10%

### Ather Energy Ltd.

Feb 2023 - Oct 2023

#### Software Developer Intern

Bangalore, India

- Developed 6 **RESTful APIs** in Spring Boot powering a favorite-locations feature for the Ather app (100K+ users), cutting location-search latency by 40% with indexed queries and Redis caching
- Built a full-stack campaign PWA using React frontend and Java backend, enabling real-time user participation across 10+ cities and driving 25K+ campaign sign-ups in the first month

### Telvue Corporation

May 2025 – Aug 2025

#### Software Developer Intern

Mt.Laurel, NJ

- Created an event-driven push notification system using **Rails microservices** and **Firebase** Admin SDK with pub/sub triggers and retry logic, increasing mobile user engagement by 40% across 13K+ users
- Led a 4-person cross-functional team (engineering, design, mobile) to unify notification UX across iOS and Android, reducing design to production integration time from 3 weeks to under 2 weeks

### Carnegie Mellon University

Feb 2026 – Present

#### Graduate Researcher (GenAI)

Pittsburgh, PA

- Fine-tuned a majority-voting ensemble of three domain-specialized LLMs on curated bio-imaging datasets; implemented consensus-based iterative training evaluated across 296 bioinformatics benchmarks, achieving a 25% accuracy improvement
- Architected and deployed a custom 8B-param LLM with tool-calling capabilities and built an async evaluation infrastructure with automated grading across bioinformatics benchmarks

## SKILLS

**Frontend:** React.js, TypeScript, JavaScript, Next.js, React Native, HTML/CSS, Redux, Context API

**Backend & APIs:** Python, Node.js, Java (Spring Boot), RESTful APIs, GraphQL, Microservices, Firebase, Flask

**AI & ML:** LLM Fine-tuning, Transfer Learning, PyTorch, TensorFlow, LangChain, OpenCV, NLP, RAG, Claude

**Cloud & DevOps:** AWS, GCP, Firebase Cloud Functions, Docker, CI/CD, Git, Postman, Linux

**Data:** SQL (PostgreSQL), MongoDB, Redis, Schema Design, Query Optimization, Data Pipelines

## PROJECTS

### Socratic LLM for Technical Pedagogy

Oct 2025- Feb 2026

- Fine-tuned a foundation LLM with custom NLP guardrails to deliver Socratic hints instead of answers, reducing answer-dumping by 85% in a 30-user pilot; built full-stack app (React and Flask) with less than 2s response latency

### RecoVR- Assistive Technology using VR

Oct 2023- Present

#### Founder & Software Engineer- Incubated by CMU

Pittsburgh, PA

- Built a Unity VR physiotherapy app with custom C scripts and positional tracking, improving patient fitness outcomes by 40% vs. traditional home exercises in a 20-patient pilot study

### Vending Analytics

Aug 2025 - Dec 2025

#### Software Engineer - Sheetz

Pittsburgh, PA

- Engineered a CV pipeline (Python, OpenCV, TensorFlow) detecting empty vending slots at 94% accuracy, served via a React dashboard that cut stockout response time by 60%

## LEADERSHIP & AWARDS

**United Nations Millennium Fellow** - Led 150 global fellows for community-impact work (2022–2023)

**Teaching Assistant** - Product Management for Innovation, Carnegie Mellon School Of Computer Science