Sparsh Hurkat

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EDUCATION

Carnegie Mellon University, Pittsburgh, PA — August 2025 - December 2026 (Expected)
Master of **Information Systems Management** — **GPA:** 3.3/4
Coursework: Cloud Computing, Object-Oriented Programming in Java, Database Management, Distributed Systems

Vellore Institute of Technology, Vellore, India — May 2022
Bachelor of Technology in **Electronics & Communication Engineering** — **GPA:** 3.74/4
Coursework: Data Structures & Algorithms, Problem Solving & OOP, Foundation to Programming, ML Fundamentals

SKILLS

Languages & Databases: Python, Java, Typescript, JavaScript, SQL, MongoDB, DynamoDB, Redis
Cloud, DevOps & Tools: AWS, SST, Azure, Docker, Kubernetes, Jenkins, CI/CD, Kafka, Linux, Git, Jest, RAG pipelines
Frameworks & Full-Stack Development: Spring, Node.js, React.js, Next.js, React-Native, Hibernate, LangChain, REST APIs

EXPERIENCE

MoneyView (Fintech), Bangalore, India — March 2022 - July 2025

Software Engineer 2

- Cut average user registration time by 5 minutes by optimizing a **serverless onboarding microservice (SST, AWS Lambda, DynamoDB)** with improved query patterns, targeted caching, and streamlined API workflows using TypeScript
- Reduced **p95 latency by 10%** through optimizations to the **service layer (Node.js/MongoDB)**; Built reusable **CMS-driven page components** and migrated the main platform to **Next.js**, improving **Lighthouse** score, maintainability and scalability
- Mentored 2 interns on **JavaScript** fundamentals, **Object-Oriented** development with **Java Spring Boot**, and **Agile practices**

Software Engineer 1

- Increased verification throughput 4x by **leading** the development of a real-time video verification platform using **WebSockets, Amazon Chime, and Java microservices;** implemented OCR-based document parsing, Google SSO auth, and scalable agent–customer routing to replace a third-party vendor and cut operational cost
- Led frontend development of a TypeScript/React vendor dashboard with **real-time, large-scale data handling** (50k+ transactions), enabling fast partner operations and the launch of a new product line that generated **$1.5M in first-year revenue**
- Reduced agent workload by 40% and doubled call-handling capacity by building **voice & chat virtual assistants** using **OpenAI APIs and Langchain**, integrating them with **Java microservices on AWS ECS** and a **React**-based agent portal

PROJECTS

Distributed Systems & Cloud Engineering — Ongoing

- Architected a **multi-cloud autoscaling system** for a high-traffic e-commerce platform using AWS EC2, Terraform, and GitHub Actions; designing load balancing strategies to sustain 10x traffic bursts while optimizing for cloud cost efficiency
- Recreated the WeChat **Spring-based microservice architecture** by containerizing chat services with **Docker** and deploying them on **Kubernetes using Helm**, enabling autoscaling, failure handling, and CI/CD automation

RAG Product Visualization System — December 2025

- Improved visual attribute-accuracy by **40%** by engineering a **multi-agent RAG + diffusion workflow,** integrating **FAISS retrieval, dynamic-k heuristics, and LLM-driven prompt refinement**
- Cut end-to-end generation time by **3×** by automating **data ingestion, review-to-prompt translation, and multi-model image synthesis**, enabling iterative evaluation and alignment across **50K+** customer reviews

Market Run - Gamified retail shopping journey, 24-hour HackCMU 2025 — September 2025

- Enhanced user interactivity in a **React Native** Pac-Man style game by integrating **real-time indoor movement data** using inbuilt sensors (no GPS) to dynamically update player movement across retail store aisles

HONORS

- **Recipient, William W. and Ruth F. Cooper Fellowship** for demonstrated academic excellence & professional accomplishments