

# Sparsh Hurkat

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## EDUCATION

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**Carnegie Mellon University**, Pittsburgh, PA

Expected December 2026

Master of **Information Systems Management**

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 AND CERTIFICATIONS

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**Languages & Databases:** Java, Python, Typescript, JavaScript, SQL, MongoDB, DynamoDB, Redis

**Cloud, DevOps & Tools:** AWS, SST.dev, Azure, Docker, Jenkins, CI/CD, Linux, Git, Jest

**Full-Stack & Frameworks:** Spring Boot, Node.js, React.js, Next.js, React-Native, Hibernate, LangChain, REST APIs

## EXPERIENCE

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**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.dev, AWS Lambda, DynamoDB)** with improved query patterns, targeted caching, and streamlined **API workflows** using **TypeScript**
- Reduced **API 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

### 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
- Reduced agent workload by **40%** and doubled call-handling capacity by building **voice & chat virtual assistants** using **OpenAI APIs**, integrating them with **Java microservices on AWS ECS** and a **React**-based agent portal
- Redesigned a fragmented legacy UI & decreased **JS bundle size by 35%** by building a **Jest-unit-tested React/TypeScript component library** with standardized **design tokens, form controls, and theming**, enabling faster development cycles
- Mentored 2 interns on **JavaScript fundamentals, Object-Oriented development with Java Spring Boot, and Agile practices**

## PROJECTS

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**Distributed Cloud Engineering & Advanced Resource Scaling**, 15-619 Cloud Computing Course Projects, CMU

- Built a **multi-cloud autoscaling system** for an e-commerce platform using **AWS EC2, CloudWatch, Kubernetes (Azure, GCP), and GitHub Actions CI/CD**, achieving **30% lower cost** while sustaining **10x traffic bursts**
- Built and optimized Spark jobs for a **50M-edge Twitter graph**, improving **PageRank** computation performance by **35%** across **Azure HDInsight and Databricks** while identifying influential user clusters for recommendation-style use cases

### Spotify - Job Application Agent

- Automated job-specific application tailoring by deploying an **MCP-based agentic workflow** on a **React 19** browser extension
- Refactored the workflow using **LangGraph**, implementing optimized **RAG nodes**, embedding **caching**, and **batched retrieval** steps that improved response speed and reduced **token usage**

### Market Run - Gamified retail shopping journey, 24-hour HackCMU 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

## HONOURS & AWARDS

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- Awarded the **William W. and Ruth F. Cooper Fellowship** for my academic success and professional accomplishments