

# SANJAY KUMAR BASKARAN

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## EDUCATION

### Carnegie Mellon University

Master of Software Engineering in Scalable Systems

Pittsburgh, PA

Dec 2026

### Vellore Institute of Technology

Bachelor of Technology in Computer Science | GPA: 8/10

Vellore, India

Jul 2024

## TECHNICAL SKILLS

**Programming Languages:** JavaScript, TypeScript, Python, C++, Solidity

**Frameworks & Libraries:** Express.js, Node.js, FastAPI, React.js, Next.js

**Databases & Storage:** PostgreSQL, MongoDB, Redis, Supabase, RDBMS

**Cloud & Infrastructure:** AWS, GCP, Docker, Kubernetes, CI/CD Pipelines, Linux Administration

**Tools & Collaboration:** Git, GitHub, JIRA, Postman

## EXPERIENCE

### Capx AI

*Software Engineer*

Dubai, UAE | Hybrid

Aug 2024 - Jul 2025

- Engineered a real-time messaging system using **AWS WebSocket API, Node.js, and Supabase**, serving **10,000+ concurrent** clients with optimized batching and session tracking.
- Spearheaded development** of the [\*\*Capx Super App\*\*](#), an AI agent marketplace launched on the Capx Testnet, a custom network built on **Arbitrum Orbit**, attracting **400,000+ unique wallets**.
- Built decentralized trading platform via **Uniswap routers**, supporting **3M+ trades** and **300,000+ daily executions**.
- Architected Capx Central Authentication using custom OAuth with JWT and client-secret hashing, **securing interaction across 20+ AI agents**.
- Migrated infrastructure from Firestore to a self-hosted RDBMS, **reducing cloud costs by 80%**.
- Designed SQL triggers** and queries ensuring consistency during **66,000 ops/sec peak loads**.

*Software Engineer Intern*

Aug 2023 - Jul 2024

- Engineered a decentralized Loot Box mechanism that processed **600,000+ transactions** with 100% accuracy, using Solidity for on-chain rewards and **RDBMS** with **nanosecond timestamps** to manage **high concurrency**.
- Established deployment pipeline** with **GitHub Actions, Amazon ECR, and App Runner** to streamline **production releases**.

### Flowace Technologies

*Software Engineer Intern*

Dallas, TX | Remote

Jul 2022 - Jul 2023

- Rewrote legacy C code** for Ubuntu app, ensuring Wayland compatibility.
- Built chrome extension** to log Asana hours and implemented OAuth code-grant with third-party apps (Node.js, loopback.io).

## PROJECTS

### Valorina

- Built a Discord bot** using **discord.py, aiohttp, and MongoDB**, serving **875,000+ users** across **15,000 servers**.
- Scaled via **sharding** and **dynamic EC2 scaling** for high-traffic resilience.

## LEADERSHIP

### Carnegie Mellon University - Master of Software Engineering

*Treasurer*

Pittsburgh, PA

Oct 2025 - Present

- Serve as **one of five core student leaders** overseeing the MSE cohort and guiding both **strategic** and **financial initiatives**.
- Manage MSE funds** and **reimbursements** to support cohort initiatives and events.

### Computer Society of India - VIT Student Chapter

*Chairperson*

Vellore, India

Dec 2022 - Apr 2023

- Organized **10+ events** with 8,000+ participants and secured funding to expand CSI's outreach.
- Co-led Devspace 2022, an international hackathon with **1,500 participants** and **\$15,000 prize pool**.
- Initiated '**Tech Thursdays**,' a weekly program still active, benefiting 100+ students.
- Directed 10+ training sessions**, fostering skill growth among CSI members.

### Vellore Institute of Technology - Yantra Hackathon

*Judge*

Vellore, India

Jun 2023

- Judged 50 teams** at Yantra 2023, VIT's **flagship hackathon**, on innovation and technical feasibility.