# Kavin Sankar

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## EDUCATION

**University of Illinois Urbana-Champaign** — Champaign, IL
*Master of Science in Computer Science* (GPA: 4.0/4.0) — *Aug. 2025 – Dec 2026*

**University of Pittsburgh** — Pittsburgh, PA
*Bachelor of Science in Computer Science & Data Science* (GPA: 3.8/4.0) — *Aug. 2021 – April 2025*

## EXPERIENCE

**Software Engineer Intern** — June 2025 – Aug 2025
*Capital One* — *McLean, VA*
- Contributed to a system that transformed a **2,500**-human agent manual process into a streamlined, ML-driven platform that reduced transaction dispute resolution times from **60 days to real-time**.
- Developed and deployed an **AWS Lambda** function in **Python** to aggregate fraud decision data from automated services and human agents, integrating with **AWS Step Functions** and other internal Lambdas.
- Wrote comprehensive unit, component, and functional tests using **PyTest** and **Gherkin**.
- Utilized **Docker** for containerization and **Jenkins** for **CI/CD** to ensure high code quality and deployment reliability.

**Software Engineer Intern** — May 2024 – Aug 2024
*PNC Financial Services* — *Pittsburgh, PA*
- Engineered **Kafka consumer services**, ingesting over **125 million** messages daily from users to assist in real-time insight generation regarding customer transactions.
- Implemented deserialization, decryption, and transformation operations on ingested messages.
- Upserted transformed message records, storing data in an **Oracle Database** by using **JDBC** and **SQL**.
- Established CI/CD pipelines, deploying applications on OpenShift by using Docker and Jenkins to scale services.
- Developed applications utilizing Kafka and **Java Spring Boot**.

**Software Engineer Intern** — Sep 2023 – Apr 2024
*University of Pittsburgh* — *Pittsburgh, PA*
- Developed 3 Python-based **microservices** for data ingestion of over **2.4 million** records.
- Integrated data, using **REST APIs** as primary data sources by designing seamless integration workflows.
- Deployed microservices on **AWS**, utilizing AWS Lambda for testing and AWS Athena for SQL queries.
- Wrote unit tests, ensuring 90% code coverage by using Pytest for thorough testing.

**CS Undergraduate Teaching Assistant** — Jan 2022 – May 2023
*University of Pittsburgh* — *Pittsburgh, PA*
- Vastly improved students' ability to solve algorithmic questions by providing targeted instruction and practice.
- Taught students multiple data structures such as Linked Lists, Stacks, Queues, & Hashmaps.
- Led **Python** programming lectures, covering core concepts and best practices.
- Taught data analysis tools, covering Pandas, NumPy, and Matplotlib by demonstrating practical applications.

## PROJECTS

**Cinect** | *Python, Flask, JavaScript, React, Docker, Google Cloud* — Feb 2024 – Apr 2024
- Developed a movie rec system utilizing a KNN machine learning model trained on 33 million ratings to deliver high-quality movie recommendations.
- Implemented using a Python Flask API backend and JavaScript React frontend.
- Setup a CI/CD pipeline using Google Cloud Build for automated testing and deployment.
- Utilized Google Cloud Firestore NoSQL database to store movie information.

**Multi-Threaded & Multi-Process Web Server** | *C, Pthreads* — Oct 2023 – Oct 2023
- Developed two implementations of a web server with multithreading & multiprocessing.
- Developed both web servers in C, utilizing threads and worker processes, to improve parallelism.
- Efficiently serves up to 500 requests simultaneously.
- Implemented synchronized logging functionality to record web page requests.

## TECHNICAL SKILLS

**Languages**: Java, Python, C, C++, SQL, Postgres, JavaScript, HTML/CSS
**Libraries/Software**: Kafka, Flask, Spring Boot, JUnit, Pytest, Oracle DB, Git, Unix/Linux, BitBucket, Jira, Postman
**Cloud/Deployment**: Docker, Kubernetes, OpenShift, AWS, GCP, Jenkins