

Sean Lee

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EDUCATION

Purdue University

West Lafayette, IN

Master of Science in Computer Science

May 2026

Bachelor of Science in Computer Science

May 2025

Relevant Coursework: Distributed Systems, Operating Systems, Computer Networks, Machine Learning, Data Structures and Algorithms, Object Oriented Programming

EXPERIENCE

Software Engineering Intern

June 2025 – Aug 2025

Klaviyo

Boston, MA

- Reduced database latency by 46% by migrating a 250-million-row database from Aurora MySQL to DynamoDB
- Ensured zero downtime by implementing dual writing and feature flags using Python
- Purged and migrated keys from a local Redis instance to Amazon ElastiCache to reduce latency by 13%
- Performed regression and integration testing using PyTest to verify expected outputs after migrations
- Automated cloud infrastructure management using Terraform in a consistent deployment process
- Improved real-time system monitoring and observability by developing dashboards in Grafana

Software Engineering Intern

May 2024 – Aug 2024

Maxar Technologies

San Jose, CA

- Worked on command and telemetry management for NASA's Power and Propulsion Element system
- Developed a REST API using Python and FastAPI to provide telemetry data access for downstream teams
- Achieved 100% code coverage by implementing unit and integration tests using PyTest
- Handled SQL database and application images with Docker Compose and AWS ECR

Teaching Assistant

Jan 2024 – May 2025

Purdue University

West Lafayette, IN

- Led weekly office hours and labs for the undergraduate operating systems course
- Developed programming assignments in C and x86 assembly that test student understanding of concepts such as dynamic process scheduling and stack memory allocation

Data Science Intern

June 2022 – Aug. 2022

American First Finance

Dallas, TX

- Analyzed market performance based on metropolitan statistical areas and identified high-potential growth areas using pandas and Plotly
- Created an automated data processing pipeline using Python to enable a dashboard with interactive charts

PROJECTS

Paxos Implementation | [Project Description](#)

- Built a highly reliable distributed key-value data storage system in Java that implements the Paxos consistency protocol
- Developed end-to-end distributed transaction support using two-phase commit and sharded data placement

Flight Prediction Model | [Poster](#)

- Implemented a machine learning algorithm to predict the destination of flights with an accuracy of 87%
- Built a pipeline of various machine learning techniques such as k-means clustering, long short-term memory neural network, k-nearest neighbors

TECHNICAL SKILLS

Languages: Python, SQL, Go, C/C++, Java, Javascript, HTML/CSS

Frameworks: Terraform, Pytest, Django, FastAPI, React, Node.js, Express, Kubernetes, Flask

Developer Tools: Git, Docker, Amazon Web Services, Sentry, Grafana, Postman, Google Cloud Platform

Libraries: pandas, NumPy, Matplotlib, PyTorch, Requests, Boto3, SciPy, Plotly