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 – Present

Klaviyo *Boston, MA*

- Migrated a 250M-record Amazon Aurora MySQL database using AWS Database Migration Service and Terraform with Change Data Capture (CDC) to enable minimal downtime and seamless data replication during cutover
- Purged and migrated Redis keys from a local Redis instance to Amazon ElastiCache to reduce latency by 26%
- Integrated a data deletion pipeline to ensure automated removal of PII data in compliance with GDPR regulations
- Performed regression and integration testing using PyTest to verify expected outputs after migrations

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
- Increased code coverage by writing unit and integration tests with PyTest
- Handled SQL database and application images utilizing 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 fault-tolerant, fully-replicated key-value store that implements the Paxos consensus algorithm in Java
- 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
- Built a pipeline of various machine learning techniques such as k-means clustering, long short-term memory neural network, k-nearest neighbors to achieve a prediction accuracy of 87%

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, Postman, Google Cloud Platform
Libraries: pandas, NumPy, Matplotlib, PyTorch, Requests, Boto3, SciPy, Plotly