## TANLEY KIM

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Education

**Purdue University** 

August 2022 - December 2025 Bachelor of Science in Computer Science; GPA: 3.61

West Lafayette, Indiana

Experience

**Amazon Web Services** 

May 2025 - August 2025

Software Development Engineer Intern

Boston, Massachussets

- Designed a comprehensive tag and property filtering system for the FSx Console using TypeScript and React, supporting multi-resource filters with different operations, debounced search, client-side pagination, and URL support.
- Identified and resolved a tagging bug in the FSx API service endpoint, collaborated with back-end engineers on the fix, authored integration test cases, and contributed to console automated testing to validate tag-filtering across all FSx resource types.
- Enhanced the FSx Ops Console File System Create form to distinguish Quick Create and Standard Create flows by instrumenting CloudWatch metrics and integrating a React analytics chart to visualize usage trends.

Kohl's Technology June 2024 - August 2024

Software Engineer Intern

San Ramon, California

- Optimized API product-monitoring services with Java, Spring Boot, and MongoDB, integrating with Mirakl marketplace platform and implementing in-memory pagination, leading to a 2-3 hour reduction in support time per sprint.
- Designed a data pipeline for products using Spring Batch and GCP, generating \$3.5 million annually from monetization efforts, while engineering CI/CD pipelines with Docker and Kubernetes to automate deployments with 82% test coverage.
- Collaborated with engineers to refactor a Java microservice into a dedicated Kafka consumer service for handling updates from third-party platforms, enabling horizontal scaling and optimizing data ingestion.

## The Data Mine - Purdue University

August 2023 - May 2024

Research Project Lead

West Lafayette, Indiana

- Organized and led weekly stakeholder meetings and sprint planning to align project objectives and managed 12-member agile team in delivering machine learning solutions for predictive maintenance of portable oxygen concentrators.
- Constructed Random Forest models in Python with scikit-learn, applying feature engineering and selection on 30+ sensor metrics from 700+ device data to accurately forecast oxygen concentration levels.
- Developed multivariate LSTM networks in TensorFlow/Keras with validation-loss callbacks to prevent overfitting, achieving 81% accuracy on a multi-month hold-out test set across diverse POC device profiles.

Comerica Bank May 2023 - August 2023

Technology Intern

Auburn Hills, Michigan

- Developed Java microservices using Spring Boot to interact with SailPoint IdentityIQ APIs, automating onboarding and offboarding for over 75 applications, saving engineers an estimated 10 hours per month.
- Incorporated lifecycle event triggers to manage user onboarding, offboarding, and role changes, collaborating with HR to synchronize user attributes and roles across systems for over 5,000 employees using MySQL queries.

## **Projects**

BluMap | React, Next.js, Tailwind CSS, Node.js, Express.js, Auth0, PostgreSQL, AWS S3, Docker, Redis

- Designed and built a full-stack travel-planning web application with a React/Next.js front end and a Node.js + Express REST API backed by PostgreSQL, enabling users to create, save, and share dynamic trip itineraries.
- Integrated AWS S3 for image uploads, Auth0 for secure SSO authentication, and the Google Maps Places API to deliver personalized destination recommendations and a richer user experience.
- Containerized the app with Docker and set up GitHub Actions CI/CD; authored 176 Jest tests achieving 85% coverage to guarantee reliable builds and smooth deployments.

Healthcare Volume Forecasting Research | Python, SQL, statsmodels, TensorFlow/Keras, scikit-learn

- Preprocessed time-series data from SQL across 14 hospital sites through z-score normalization and min-max scaling, implementing Poisson, Generalized Poisson, and Negative Binomial GLMs in Python, benchmarking against a system-wide model.
- Engineered and hyperparameter-tuned LSTM models with TensorFlow/Keras to predict three-month surgery and inpatient volumes with 90% accuracy, presenting weekly to IU Health leadership.

BoilerMarket | React, TypeScript, Tailwind CSS, Python, Django, Firebase, MySQL, AWS

- Engineered a full-stack online marketplace for Purdue students, implementing secure authentication with Firebase, S3 media storage, and a real-time direct messaging system, live notifications, and session persistence.
- Enhanced user engagement by implementing search, filtering, and caching of search history, and verifying Purdue student authentication to enable secure, in-area, and built an admin dashboard for real-time moderation and analytics.

## Technical Skills

Languages: Java, Python, C, C++, JavaScript, HTML, CSS, SQL, Bash

Technologies: AWS, React, Spring Boot/Batch, MongoDB, Django, Next.js, PostgreSQL, Node.js, MySQL, Express.js, Flask, OpenShift, Kubernetes, Jenkins, Selenium, Google Cloud, Postman, Git, Docker, Kafka, Redis