Stephen Usselman

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Skills

Programming Languages: C++, Python, Java, PHP, JavaScript
Frameworks and Libraries: Spring Boot, Laravel, Alpine, Tailwind, pandas, scikit-learn, matplotlib
Tools, Platforms, and APIs: AWS(Elastic Beanstalk, DynamoDB), OpenAI API, SQL, Git, Gradle, Jira

Academic & Project Experience

AI-Powered Incident Response System
Backend & Cloud Application 2026

- Designed and implemented a Spring Boot application for ingesting and managing incident reports via REST APIs
- Integrated asynchronous OpenAI API-driven enrichment to generate incident summaries, classifications, and remediation guidance
- Ensured AI service failures did not block data persistence or API responsiveness through defensive, non-blocking design
- Modeled incident data using DynamoDB single-table design with Global Secondary Indexes for efficient severity- and category-based queries. Implemented pagination using DynamoDB LastEvaluatedKey for scalable result sets
- Deployed the application to AWS Elastic Beanstalk with environment-specific configuration
- Developed unit and integration tests with enforced coverage thresholds using JaCoCo

Itiner-Ease
Full-Stack Collaborative Web Application 2025

- Contributed to the design and development of an AI-powered itinerary generation platform using the Laravel TALL stack
- Implemented CSV-based data ingestion and normalization pipelines for location and activity datasets
- Integrated OpenAI APIs to generate personalized travel itineraries based on user preferences
- Collaborated in a team environment to coordinate features, manage tasks, and maintain application functionality

Tsunami Prediction Model
Machine Learning Project 2025

- Built a binary classification model using a tuned HistGradientBoostingClassifier to predict tsunami occurrence from seismic data
- Trained and evaluated the model on 782 earthquake events, incorporating magnitude (Richter), focal depth, CDI, MMI, and geographic coordinates
- Performed feature engineering and validation using historical earthquake and tsunami datasets spanning 2001–2022
- Implemented data analysis and visualization workflows using scikit-learn, pandas, and matplotlib

Education

Bachelor of Science in Computer Science
Old Dominion University Graduated: Fall 2025

Relevant Coursework:
Object-Oriented Programming and Design; Database Concepts; Operating Systems;
Computational Methods and Software; Professional Workforce Development