



Sean Jung

Software Engineer | Active TS/SCI | AWS-certified | U.S Navy Veteran

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TECHNICAL SKILLS

- Python | Java | Kubernetes | Docker | FastAPI | PyTorch | Scikit-Learn | LangGraph | MCP | LLMs | Milvus
- AWS | Google Cloud | TensorFlow | SQL | Redshift | DynamoDB | Django | React | gRPC | GraphRAG | Neo4j
- Linux | Bash | Sagemaker | Bedrock | Spark | Kafka | Clustering | Machine Learning | Data Visualization | Git

EXPERIENCE

SOFTWARE ENGINEER – AI & DATA MODERNIZATION Feb 2025 – Present

Deloitte LLP | Government & Public Services | Tampa, FL, USA

- Developed and deployed an enterprise-scale, AI microservice application on AWS EKS that detects illegal supply chain activities for counter-drug operations, supporting over +2M data analysts in TS environment.
- Developed a Natural Language Processing (NLP) pipeline for entity recognition and relationship resolution, to construct a 42M+ entity knowledge graph on Neo4j, derived from +12M classified reports.
- Implemented a HDBSCAN clustering algorithm to optimize query quality and retrieval on a Milvus vector database, increasing speed by 31% while maintaining accuracy, availability and reliability for over +2M users.
- Implemented a Redis queue and caching system for distributed databases with a custom pipeline-coordinator to monitor and debug data processing at scale.
- Orchestrated CI/CD workflows for 3 defense enterprise applications, adding secure vulnerability assessments and monitoring tools (i.e Splunk, CloudWatch) while accelerating deployments across dev, QA, and production.

SOFTWARE ENGINEER – AI & DIGITAL TRANSFORMATION Aug 2024 – Nov 2024

Google LLC | Google Public Sector | Seattle, WA, USA

- Deployed Google's GenAI for Enterprise (GENIE) platform using Kubernetes clusters for a public educational client, enabling the use of customized LLMs with retrieval-augmented generation (RAG) via LangGraph.
- Deployed a data pipeline for extracting knowledge graphs from unstructured data sources via Vertex AI, creating a comprehensive personalized learning system using Neo4j and Google Cloud Storage instances.
- Executed Terraform modules to configure cloud infrastructure based on the project's CI/CD standards.

DATA ENGINEER – SPACE WEATHER & HELIO-ANALYTICS Jan 2024 – Jun 2024

NASA Jet Propulsion Laboratory | Caltech | Pasadena, CA, USA

- Implemented an ETL data pipeline to ingest and transform 87GB+ of geomagnetic data from NASA's OMNIWeb and SuperMAG databases, to train ML models for predicting space weather patterns and its effect on U.S power infrastructure. Resulted in an LSTM model with >90% F1-score. (2nd Place - UW ENGINE Competition)
- Delivered a React.js website for visualizing project research and analytics with an interactive Plotly dashboard.

FACILITIES ENGINEERING & ACQUISITION DIVISION DIRECTOR Aug 2022 – Jun 2023

Naval Facilities Engineering Command | Naval Support Facility Deveselu | Deveselu, Olt, Romania

- Refactored the internal C-based control software within a critical HVAC unit for the Navy's \$1.2B Aegis Ashore Missile Defense System to enhance reliability, increasing performance by 132% via convex optimization.
- Developed a \$7.3M base services contract with Vectrus Inc. (via task order) for the daily operations and maintenance of utilities and equipment to support base security, fire protection, and anti-terrorism efforts.

PROJECTS

SEMANTIC SEGMENTATION | INT. SOCIETY FOR PHOTOGRAMMETRY AND REMOTE SENSING

- Designed and implemented a FastCNN, ResUNet, and transformer-based neural network that can delineate public structures through sole visual segmentation using digital aerial images, reaching a +83% F1-score.

FOOD PRODUCT REVIEWS | AMAZON

- Created a logistics regression model using scikit-learn and seaborn to quantify and categorize the emotional sentiment of 1251 Amazon product reviews for evaluating the success of a given Amazon product.

EDUCATION

University of Washington (Seattle, WA) **M.S in Electrical Engineering** – GPA: 3.9

United States Naval Academy (Annapolis, MD) **B.S in Naval Architecture & Marine Engineering** – Top 25%

CERTIFICATES & LICENSES

AWS Solutions Architect (SAA-C03) Certification

Active: 02/09/2025

Professional Engineer (PE) – State of Washington and Oregon

ID: 23014628 / ID: 99743PE

Project Management Professional (PMP) – Agile and Scrum Methodology

ID: 3012182