Ryan C. Condotta

CONTACT

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EDUCATION

MS: Modeling and Simulation
Old Dominion University

BS: Modeling and Simulation
Old Dominion University

Professional Certifications

TensorFlow Developer Certification

Certified Professional Python Programmer

KEY SKILLS

Software: C / C++ (Boost) / Python

Docker / Docker Compose

SQLite / PostgreSQL / MySQL

MongoDB

Git / GitHub

Atlassian Products

Data Analysis (NumPy, Pandas)

Visualization (Seaborn, Matplotlib)

Machine Learning (Scikit-Learn / TensorFlow / PyTorch)

Computer Vision (OpenCV)

Modeling and Simulation

Shell Scripting

OBJECTIVE

A highly motivated individual searching for a challenging position as a Software Engineer to utilize my technical skills, knowledge of software development, and passions in machine learning, deep learning, and computer vision to further my career.

PROFESSIONAL EXPERIENCE

Senior Software Developer **2022 – Present**
Analytical Mechanics Associates, Hampton, VA

- Spearheaded the design and implementation of a PostgreSQL database for storing and managing large volumes of flight logs using Python scripts for data ingestion. This solution significantly improved data accessibility and enable efficient data analysis for high priority decision-making.
- Built and maintained a data pipeline for processing and analyzing flight logs, from data acquisition and cleaning to model training and evaluation. This end-to-end approach enable timely and reliable deployment of anomaly detection models for crucial flight operations.

Software Developer **2016 – 2022**
Analytical Mechanics Associates, Hampton, VA

- Lead the design and implementation of the *real-time risk assessment framework* (RTRA), a modular cross-platform library, which enabled seamless integration into many large-scale projects.
- Refactored and applied Kinematic, Point Mass, and 6-Degree of Freedom trajectory equations for autonomous vehicles and outlined performance constraints for real-time operations.
- Constructed a building database in SQLite for a variety of geospatial location that facilitated the assessment of aircraft impacts with penetration modeling.
- Deployed the RTRA library to an onboard application and monitored the evaluation of the application as it successfully completed over 100 flight tests.
- Built a comprehensive unit test suite (90 cases) with Software in the Loop simulation for the deployed application that increased reliability of the system and passed NASA software classification requirements.
- Architected a schema with multi-threaded approaches with OpenMP and Pthreads for a multi-trajectory assessment to improve software performance for real-time operations.
- Gathered and presented analytics of the onboard system to team members which helped assess the aircraft performance, health, and abnormal behaviors.
- Supported the development of a preflight tool that utilized the RTRA methodology with RESTful API's by developing docker files.
- Aided in the refactoring of an aircraft sizing tool (Fortran 77) legacy software to modern Python object-oriented code by implementing and extending mission and aeronautical algorithms. This was verified and validated to assure the customer of software accuracy and performance.

Summer Internship **2015**
Nucor Corporation, Ahoskie, NC

- Refactored Scanner Application to streamline delivery of steel characteristics to SQL/Oracle databases.
- Developed front-end interfaces for Mill workers with JavaScript, HTML, and CSS that organized and presented steel metrics.
- Automated emails with Python to send daily Mill performance from database to managers that were utilized in morning briefings.