Duy Nguyen

Security Clearance: Secret

AWS Certified Developer with 4 years of professional experience in software development and data analysis. Strong mathematical modeling and software engineering skills with a Master in Computational and Applied Math. Currently pursuing a Master in Software Engineering.

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WORK EXPERIENCE

Programmer
Southern California Water Research Agency

07/2019 - Present

3535 Harbor Blvd., Suite 110, Costa Mesa, CA 92626

Full-time

Achievements/Tasks

- Develope and maintain website applications to automate quality control data submission process for partner agencies.
- Design, construct, and maintain the organization's data management system.
- Collaborate with the SCCWRP's scientists to develop reports analyses, and visualizations of collected data. Develop the test automation process and tools.
- Develope dashboards using R-Shiny/ Flask app to share insights with the clients and researchers from Southern California's wastewater treatment agencies, storm-water management agencies and water-quality regulatory agencies.
- Lead and guide student interns in performing technical tasks for project work.

Mathematician
Naval Air Weapons Station China Lake
Department of the Navy

02/2022 - 07/2022

China Lake, CA

Full-time

Achievements/Tasks

- Researched and developed technologies to deliver advanced, integrated air warfare capabilities to ensure mission success for the Navy and Marine Corps team.

EDUCATION

Master of Science: Software Engineering
California State University, Fullerton

08/2023 - Present

Master of Science: Applied Mathematics
California State University, Fullerton

08/2019 - 01/2021

GPA: 3.94/4.0

Bachelor of Science: Applied Mathematics
California State University, Fullerton

08/2016 - 08/2019

GPA: 3.60/4.0

COMPUTER SKILLS

Programming: Python (Pandas, Numpy, Scipy, Matplotlib, Scikit-learn), R, R-Shiny, MATLAB, SQL, ArcGIS SDK for Python, AWS SDK for Python

Databases: PostgreSQL, NoSQL, MongoDB, Extract-Load-Transform (ETL), Automation

Web Development: HTML, CSS, JavaScript, Flask, ArcGIS for JavaScript, AWS, Docker

Version Control: Git/GitHub

CERTIFICATION

AWS Certified Developer (08/2023 - 08/2026)
https://www.credly.com/badges/ae7ce3bc-8d0a-4be8-87d3-8d0941cb7064/public_url

PROJECTS

Monitoring the effects of BMPs (Best Management Practices) across the U.S. (SCCWRP) (01/2020 - 05/2022)

- Oversaw project tasks focused on developing a data analysis and management system using Python and Docker. The system was designed to collect data from environmental sensors that monitor soil factors such as water level and temperature during both dry and wet weather conditions.
- Worked closely with scientists and engineers from the U.S. Environmental Protection Agency (EPA) to automate two critical processes: one for detecting sensor malfunctions in raw data and the other for conducting statistical analysis on this data.
- Developed an automated process to store analyzed data in a cloud-based database and generate reports.
- Developed an R-Shiny application to provide interactive dashboard for data visualization.
- Link to project: https://www.sccwrp.org/about/research-areas/stormwater-bmps/

Terrain Coverage Analysis Tool (NASA/JPL) (01/2020 - 05/2021)

- Led a team of graduate students to model, analyze and visualize the lunar terrain.
- Generated the regional dynamic simulation of the Sun illumination, Earth communication coverage, Lunar Relay Satellite communication.
- Visualized the terrain from a lunar asset including the Line-of-Sight communication, Sun Illumination, and Earth Visibility.
- Developed the Terrain Coverage Analysis Tool (TCAT) to incorporate all mathematical models and delivered it to NASA/JPL.