

# Duy Nguyen

U.S. Citizen

AWS Certified Developer with 3 years of professional experience. Proficient in full stack development, cloud technology, database management and analysis. Strong mathematical modeling and software engineering skills with a Master in Computational and Applied Math. Holds a Final Secret Clearance (inactive since 07/22).

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## WORK EXPERIENCE

### Programmer/Statistician

#### Southern California Water Research Agency

07/2019 - Present

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

Full-time

##### Achievements/Tasks

- Developed and maintained website applications to automate quality control data submission processes for research and development agencies.
- Designed, constructed, and maintained the foundation of an organization's data management system.
- Collaborated with the SCCWRP's scientists to develop reports analyses, and visualizations of collected data. Established the test automation process and tools.
- Developed 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.

### Mathematician/Data Scientist

#### 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.
- Obtained the final SECRET clearance.

## 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](https://www.credly.com/badges/ae7ce3bc-8d0a-4be8-87d3-8d0941cb7064/public_url)

## PROJECTS

### 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.

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

- Oversaw project tasks aimed at developing a data analysis and management system utilizing Python and Docker. The system was designed to collect data from environmental sensors monitoring soil factors such as water level and temperature during dry and wet weather conditions.
- Collaborated with scientists and engineers from the U.S. Environmental Protection Agency (EPA) to automate the data flag checking process for raw data, which identifies sensor malfunctions, as well as the statistical analysis performed on such data.
- Developed an automated process to store analyzed data in a cloud-based database and generate reports for submission to the U.S. Environmental Protection Agency (EPA).
- Developed an R-Shiny application to provide interactive dashboard for data visualization.