

Gerardo Lopez Jr.

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EDUCATION

University of California, Irvine - Irvine, CA

Expected Sep. 2026

Bachelor of Science, Mathematics: Research in AI in Education

Relevant Courses: Data Structures, API, Sockets and Protocols, Linear Algebra, Asymptotic Analysis, OOD.

WORK EXPERIENCE

AWS Full Stack Developer

Digital Learning Lab | Irvine, CA | Full Time

Jan. 2024 - Present

- Launched an AI prompt testing site with Retrieval-Augmented Generation by leveraging AWS resources such as Bedrock, S3 Buckets, and more within AWS Cloud Development Kit in Python.
- Optimized data extraction process in Amazon DynamoDB and cut costs by 60% using AWS Lambda.
- Integrated external site into Canvas using LTI 1.3 protocol, Typescript, Docker and DynamoDB.
- Stress-tested potential bottlenecks for our AWS-hosted APIs and graphed results all in Python.

Data Analyst

CP-LEADS | Irvine, CA | Part Time

Jan. 2024 - Nov. 2024

- Analyzed user-messages locally using Topic Modeling in R and Sentiment Analysis in Python.
- Created visual models of user engagement using “Tidyverse” in R for custom graph designs.
- Published common themes for user-engagement in research papers with professors of UCI as co-authors.

Software Engineer Intern

CodeAI | Irvine, CA | Full Time

Jun. 2023 - Sep. 2023

- Developed a Python package to generate full HTML sites from a Google Colab notebook.
- Implemented unit testing for code quality assurance across all assisting developers in Github.
- Utilized Google's Drive API to dynamically aggregate Google Co-Lab notebooks into a collection.

INDEPENDENT CONTRACTOR

Mortgage Depository - Website

Oct. 2023 - Feb 2024

- Built a dynamic mortgage tracking website using Flask and MongoDB Atlas, featuring custom user logins, API integration, and deployment on Google Cloud Platform.

Storage Production Tracker - Website

Jun. 2022 - Jan. 2023

- Developed a Streamlit-based web app to help employees track and calculate orange production reliably, using Python for both frontend and backend.1

Python Student Tutor - In Person

Nov. 2021 - May 2023

- Independently tutored 3-5 UCI students at a time from beginner to intermediate Python, covering programming fundamentals, API usage, server protocols, and standard libraries.

CERTIFICATIONS

AWS Cloud Practitioner

Expected Jan. 2026

- Foundational AWS concepts, core services, best practices, and cloud architecture.

Git Certification

Apr. 2025

- Proven expertise in version control and collaborative development using Git.

CITI Program Certification

Mar. 2024

- Allows a person to work with user sensitive information.

TECHNICAL SKILLS

Programming Languages: Python, JavaScript/TypeScript, HTML, CSS, R, Matlab

Frameworks/Libraries: NodeJS, React, Pandas, NumPy, Flask, Streamlit, SQLAlchemy

Cloud & DevOps: AWS CDK, Amplify, Lambda, DynamoDB, MongoDB S3, Supabase, CodePipeline

Tools & Software: Docker, Git, GitHub, Postman, PyCharm, Jupyter, RStudio, SolidWorks, Wix, Weebly