

RENATA CALLE

Seattle, WA | Full Stack Developer | AI Software Engineer
786-915-0939 | rcf747@gmail.com | [linkedin.com/in/renatacalle](https://www.linkedin.com/in/renatacalle) | github.com/renataCalle

PROFESSIONAL SUMMARY

Programming: C#, Python, SQL, JavaScript, TypeScript, Java, Angular, React, .NET Core, Docker

Technical Skills: Claude Code, AI agents, REST APIs, GenAI, Microservices Architecture, Cloud Computing, Docker, AI/ML

Cloud & DevOps: Azure DevOps, AWS (EC2, S3, CloudWatch, Lambda), Google Cloud, CI/CD

Databases: Snowflake, MySQL, PostgreSQL, Redis

EXPERIENCE

Senior Software Developer II

May 2023 – Present

Management Science Associates, Pittsburgh, PA

- Led end-to-end development of multiple software features (from requirements through deployment) in an Agile environment, delivering 100% of sprint commitments on schedule and meeting all acceptance criteria.
- Designed and implemented over a dozen backend RESTful APIs in C# .NET Core, enabling new client-facing functionalities and handling ~3,000 daily requests with high reliability.
- Automated enterprise reporting with Aspose.Cells (C#), processing millions of data rows into dynamic dashboards and eliminating 20+ hours of manual work per week for the client's analytics team.
- Resolved critical integration issues by troubleshooting across AWS environments. Proactively reproduced bugs in staging, resulting in a 40% drop in production incidents and faster issue resolution.
- Collaborated cross-functionally with front-end, QA, and product teams to overcome API dependency and data synchronization challenges, ensuring seamless end-to-end system orchestration across multiple services.
- Communicated technical progress to stakeholders by presenting quarterly demo sessions to VP and senior leadership.

Software Developer Intern (Penn State College of Medicine)

January 2022 - July 2022

- Developed responsive front-end architecture for medical research web application using Angular and TypeScript, serving healthcare professionals across 30+ countries
- Collaborated with medical professionals to design intuitive user interface for complex data visualization

Research Assistant (Penn State University, Harrisburg, PA)

January 2020 - July 2020

- Designed optimization applications using MATLAB for linear programming, improving computational efficiency
- Created 3D visualization tools for optimal bounds analysis using Python and matplotlib
- Increased research productivity by 70% through process automation and algorithm optimization

Research Assistant Intern (Princeton University, Princeton, NJ)

July 2019 - August 2019

- Achieved 94% data cleaning rate by developing an automated pipeline using Python Pandas library
- Built data merging and validation scripts to process government datasets with millions of records
- Generated statistical reports and interactive visualizations for Dominican Republic government data analysis

EDUCATION

Pennsylvania State University, Harrisburg, PA

August 2019 - December 2022

Bachelor of Science in Computer Science

Honors: Graduated with Honors in Humanities, Member of Upsilon Pi Epsilon Computer Science Honor Society

Relevant Coursework: Algorithm Design, Machine Learning, Cybersecurity, Software Engineering

PROJECTS

AI-Powered Document Digitization Platform

Ongoing (Started May 2025)

- Architected a cloud-based microservice platform for PDF digitization using AI models (VGT + LLMs), achieving 95% accuracy on complex and handwritten documents. API adopted by researchers at Northwestern University, Columbia, UChicago, and financial firms in the US, saving tens of thousands of USD in efficiency.
- Tech Stack: Python/FastAPI, PostgreSQL, Docker, Redis, RabbitMQ, Google Cloud, React.

eCommerce Admin Dashboard

January 2023 - February 2023

- Built real-time data visualization dashboard using React, Node.js, Tailwind CSS, Redis, PostgreSQL, and Git

RESEARCH

- Calle, R., et al. "A Novel Microservices Architecture for AI-Powered Document Layout Analysis and Content Extraction."
- Kocis, P.T., Wadrose, S., Wakefield, R.L., Ahmed, A., Calle, R., Gajjar, R., Vrana, K.E. (2023). "CANNabinoid Drug Interaction Review (CANN-DIR)." Medical Cannabis and Cannabinoids. DOI: 10.1159/000528528

LANGUAGES

English (Professional), Spanish (Native)