

Antonio Aranda

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Education

Columbia University

May 2024

B.A. in Computer Science (GPA: 3.92, Dean's List)

New York, NY

- **Coursework:** Data Structures, Algorithms, Databases, AI, NLP, UI/UX Design, Systems Programming in C

Experience

Amazon Web Services

Jun 2024 – Aug 2024

Software Engineer Intern

New York, NY

- Automated paginator model customizations in Botocore using Python, reducing manual intervention by the AWS Boto3/CLI teams and eliminating a key pain point for service teams.
- Integrated automation into AWS CLI and Boto3 CI/CD pipelines using AWS CodeBuild, S3, and TypeScript (CDK), streamlining development and release processes for SDK and service teams.
- Developed a shared Python tools library for AWS CLI and Boto3 build systems, reducing code duplication and enhancing maintainability across both projects.
- Implemented robust unit, integration, and end-to-end test suites using Pytest, Moto, and Jest.

Amazon

May 2023 – Aug 2023

Software Engineer Intern

Seattle, WA

- Designed and deployed a text phrase generator microservice for new Alexa voice authentication system, simplifying the user verification process for millions of customers.
- Developed low-latency gRPC APIs for microservice in Java, containerized with Docker, and deployed on AWS ECS Fargate, ensuring scalability to new authentication challenges
- Implemented infrastructure as code using AWS CDK with TypeScript and designed a scalable DynamoDB data model, optimizing deployment processes and data operations for projected growth.
- Implemented comprehensive unit and integration tests using Mockito and JUnit.

Accessible and Accelerated Robotics Lab

Sep 2022 – May 2023

Researcher

New York, NY

- Leveraged parallel CUDA C++ on NVIDIA GPUs to increase performance of robotic motion planning algorithms by 3-4x over state of the art CPU baselines.
- Prototyped modern trajectory optimization algorithms and constraint handling techniques in Python.
- Investigated and tested the benefits of GPU over CPU architecture to solve computationally expensive algorithms.

Columbia University

Aug 2022 – Dec 2022

Course Assistant

New York, NY

- Assisted Professor Brian Borowski in teaching COMS 3134 Data Structures in Java for over 400 students.

Projects

Foodie Radar | Go, Postgres, Google Cloud, React, Next.js, TypeScript

foodieradar.antonioaranda.dev

- Developed a web application that helps users choose where to eat by providing personalized recommendations based on user preferences and location, all ranked by popularity.

Travel Buds | SwiftUI, IOS, Firebase, NoSQL

github.com/arandito/travel-buds

- Implemented an IOS application that improves travel experiences by matching travelers into group chats (based on trip destination, dates, and interests), allowing them to communicate with others and plan social gatherings.

US Air Quality Alert | Python, Redis, Docker, Google Cloud Run, Twitter (X) API

x.com/airquality_usa

- Deployed an automated Twitter account that alerts users of air quality changes in America's 75 most populous cities, featuring color-coded maps based on AQI levels.

International Wordle | React, Next.js, Typescript, Go, Docker, Google Cloud

wordle.antonioaranda.dev

- Built an expanded version of the "Wordle" game, where players can repeatedly guess words in English, Spanish, or French with varying difficulties.

Technical Skills

Languages: Python, Java, TypeScript, JavaScript, Go, Swift, C/C++, CSS, HTML, SQL

Technologies: AWS, Google Cloud, Docker, PostgreSQL, Redis, React, Next.js, Vercel, SwiftUI, Flask, Node.js, CUDA