

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 overhead by 85% for the AWS Boto3/CLI team and eliminating a key pain point for service teams
- Integrated automation into AWS CLI and Boto3 CI/CD pipelines using CodeBuild, S3, and TypeScript (CDK), streamlining development and release processes for SDK and service teams
- Implemented a shared Python tools library for AWS CLI and Boto3 build systems, reducing code duplication and enhancing maintainability across both projects
- Developed robust unit, integration, and end-to-end test suites using Pytest, Moto, and Jest

Amazon

May 2023 – Aug 2023

Software Engineer Intern

Seattle, WA

- Deployed a text phrase generator microservice for new Alexa voice authentication system, processing over 86,000 requests daily and simplifying the user verification experience for customers
- Implemented low-latency gRPC APIs for microservice using Java, containerized with Docker, and deployed on ECS Fargate, ensuring scalability for future authentication methods
- Established infrastructure as code using the AWS CDK with TypeScript and designed a scalable DynamoDB data model, optimizing deployment processes and data operations for projected growth
- Developed 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

Teaching 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 destinations, dates, and interests, allowing them to chat with others in real time 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