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 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.
- Developed a shared Python tools library for AWS CLI and Boto3 build systems, reducing code duplication and improving 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 customers.
- Developed low-latency gRPC APIs for microservice in 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.
- 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 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