

ALEX DIAZ

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EDUCATION

Georgia Institute of Technology

Atlanta, GA

Master of Science in Computer Science GPA 4.0 / 4.0

Jan. 2021 – May 2023

The University of Georgia

Athens, GA

Bachelor of Arts in Economics, Minor in History

Aug. 2013 – May 2017

PROJECTS

- **2021 – Multi-threaded socket server and client** – I wrote a multi-threaded server in C utilizing the Sockets library. Files are requested via HTTP requests. I created a client is used to make bulk requests and transfer files over a predetermined socket. Both programs provide IPv4 / IPv6 interoperability and multi-threading (C libraries).
- **2021 – AI Agent** – I developed an AI agent that uses human cognition strategies to solve Raven's Progressive Matrices. I used computer vision and human-like cognition algorithms to enable the agent to process IQ test images as problems; resulting in a success rate of 70%. I implemented the agent in Python, using object oriented computer programming, OpenCV, and NumPy. I designed my agent's architecture based on Newell's SOAR model, enabling learning strategies via meta-cognition when heuristics failed.
- **2020 – TimeTime** – I programmed a Java Android application that prompts users through their lock screen to log their daily activities. The application uses a model-view-controller pattern to provide users an infinite scrolling list and enable interactions with good performance and a beautiful UI / UX created with Jetpack. My architecture allowed for local persistent data and concurrency.
- **2019 - Spotify Music Advisor** – I wrote a Java application using the Spring boot framework, capable of REST API communication with Spotify. I implemented the application to use OAuth. Enables users to query playlists.

EXPERIENCE

Software Engineer Tutor

Feb 2020 – Present

Tokyo Coding Club & FDS Services

Tokyo, Japan

- Teaching students on software engineering practices and the fundamentals of Python and OO design.

Data Analyst Manager

Nov 2018 – Nov 2019

United Parcel Service (UPS)

Sandy Springs, GA

- Migrated my team's reporting stack to an automated workflow.
- Created dashboards to analyze and aggregate metrics in my division; led to the automation of reports.
- Implemented automated reporting applications by designing and rewriting SQL database tables to feed more than 500,000 data entries into VBA and Python applications.
- Led and coordinated inter-team reporting, streamlining other teams' workflows; Reduced average reporting workload from 3 hours to 3 minutes using applications I wrote in Python (Pandas, SQLite).
- Developed software and mentored peers on three teams using Python, MSQl, and VBA.
- Finalists in the UPS upstart startup program; coordinated with a multi-national team to present how encryption technology could impact UPS. Member of the UPS mentorship program.

TECHNICAL SKILLS

Languages: Java, Kotlin, Python, C, C++, Go, SQL, VBA, HTML/CSS, Bash

Frameworks & Libraries: Spring, JUnit, Gradle, Flask, Android, NumPy, Pandas, OpenCV / computer vision

Dev Tools: Git, Agile, Google Cloud, AWS, VIM, Docker, Make, Linux, Unit Testing

Misc: CFA LV 1, NLP, AI, API design, systems design, software architecture, equities, Math club, Seinfeld