

Rafael Piloto

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Education:

Emory University • GPA: 3.969 • Atlanta, GA • August 2020 - Expected: May 2024

- Bachelor of Science in Computer Science, Minor in Quantitative Sciences
 - Courses: Data Mining, ML, Data Struct. and Algo., Comp. Arch., A.I., Sys. Prog., Appl. Regression, Appl. Comp., Stat. Comp.
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Work Experience:

Google SWE Intern • Sunnyvale, CA • May 2023 - August 2023

- Design and implement a worker binary to automate and optimize Google Cloud Security Data Residency's Monitoring and Compliance onboarding process saving 10 SWE days of work per quarter and frictionless experience for Google Service Teams
- Technologies: C++, Distributed Systems, Multi-threading, Abseil, Flume, Bazel, Internal Server Frameworks, gRPC

Reffy Inc. Lead Software Developer • Atlanta, GA • August 2022 - May 2023

- Designed and implemented scalable, distributed infrastructure to handle traffic supporting all application and business operations, including the client-facing web application and microservice backends for various functionalities reducing customer labor by 80%
- Provided oversight and collaborated with 3 FTE to implement infrastructure and features within product requirement deadlines
- Technologies: Golang, TypeScript, React, GCP Cloud Run & Logging, Docker, Protobuffers, Firebase, Redis, DevOps, Stripe, Jira

Air Force Student Researcher • Atlanta, GA • February 2023 - May 2023

- Integrated automated hyperparameter model tuning for Deep-Q Networks using sweeps and data analysis
- Technologies: Python, NumPy, Matplotlib, Weights and Biases, Pandas, Data Science, GCP

Google STEP Intern • Sunnyvale, CA • May 2022 - August 2022

- Updated existing Vertex AI Debug Console and migrated a legacy console to centralize debugging resources using distributed databases (Spanner) to point to, cache, and display internal resource views optimizing engineer response and debugging time
- Optimized & centralized debug journey experiences eliminating cognitive burden, improving reliability & accessibility by 80%
- Technologies: Spanner, Golang, TypeScript, Kubernetes, GCP Logging, GKE, Angular, Bazel, Protobuffers, GCP, Unit Testing

Air Force Student Researcher • Atlanta, GA • August 2021 - May 2022

- Develop Human-Computer Multi-Modal Controllers using computer vision and natural language processing.
- Implemented gesture recognition for automatic video cropping and smoothing increasing model accuracy and validation by 15%
- Technologies: Python, NumPy, Matplotlib, MediaPipe, OpenCV, Computer Vision, Gesture Recognition

Google STEP Intern • Remote • May 2021 - August 2021

- Implemented library framework to allow for test machine reservation and VM bin packing for Noisy Neighbor Tests.
- Library Framework streamlined the necessary steps for integration tests by bridging Google Machine Reservation Infrastructure to automate machine reservation & VM bin packing reducing the number of steps & time needed to write tests by 70%
- Technologies: Golang, Protobuffers, Remote Procedure Calls, Unit Testing, Machine Reservation, Mocking, Infra Design

Air Force Research Lab Student Researcher • Atlanta, GA • January 2021 - August 2021

- Refined reinforcement learning models for a robotic manufacturing process to optimize the propeller blade inspection process at Warner Robins Air Force Base. Abstracted model to reduce model configuration by over 80% with no required user-facing software
 - Technologies: Google Cloud Platform, Python, Reinforcement Learning, Deep Learning
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Projects: github/RafaelPiloto10

EduSearch • January 2023 - May 2023 • [github/RafaelPiloto10/EduSearch](https://github.com/RafaelPiloto10/EduSearch)

- Experimental, full-stack search engine indexed with university webpages to explore custom search engine development and crawling
- Technologies: Typescript, Python, HITS, SimRank, PageRank, React, Tailwind CSS, Express JS, Web Crawlers, Web Indexers

Quack • August 2021 - May 2022 • github.com/Bestagons/quack

- Developed mobile, full-stack app for Emory University Dining to remove the frustrations of on-campus dining
 - Technologies: Flutter, Dart, Python, Web Scraping, UI Design, Beautiful Soup, Fast API, MongoDB, Heroku, CI/CD, Scrum
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Organizations:

Emory Hack4Impact Director of Software Engineering • May 2022 - Present • Lead team to develop software for nonprofits

Emory Robotics President • January 2021 - Present • Founder & President of Emory Robotics competing in competitive robotics

FIRST Robotics Alum & Mentor (Java) • August 2016 - Present • Teach Java & robotics to high schoolers in competitive robotics

Achievements: QuestBridge National College Match Scholar (11/2019-Present) • Amazon AWS InCommunities Scholar (08/2020-Present)

Languages: English (Native) • Spanish (Native) • American Sign Language (Native) • Mexican Sign Language (Proficient)