

Rafael Piloto

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Education:

Emory University • GPA: 3.985 • Atlanta, GA • August 2020 - Expected: May 2024

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

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

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 and display internal resource views optimizing engineer response and debugging time
- Implemented custom engineer-facing value caching layer for debug console input values to reduce tedious cognition/tab hops.
- Optimized/centralized debug journey experience 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

- Aided to develop Human-Computer Multi-Modal Controllers with computer vision and natural language processing.
- Implemented gesture recognition classification smoothing increasing model accuracy and validation by 15%
- Working to implement automatic video cropping for model training by recognizing gesture key marks and frames
- 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.
- Noisy Neighbor tests are difficult to write due to required hardware preparation, interaction, and clean-up.
- 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

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 & Skills: [github/RafaelPiloto10](https://github.com/RafaelPiloto10)

Quack • August 2021 - Spring 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

Spotify Song Recommender API • May 2019 - May 2020 • [github/RafaelPiloto10/Spotify-Mood-Recommender](https://github.com/RafaelPiloto10/Spotify-Mood-Recommender)

- Web Scrapped +800 song lyrics, performed sentiment analysis on lyrics, and created TensorFlow estimators to recommend songs
- Technologies: Python, JavaScript, TensorFlow, Sentiment Analysis, Custom Backend API for A.P.O.L.L.O

FIRST Robotics Competition • August 2016 - Present • [github/NAHSRobotics-Team5667](https://github.com/NAHSRobotics-Team5667)

- Managed and led a team of programmers to collaborate, develop, implement, and test software within 2 weeks
 - Technologies: Java, PID Control Loops, Autonomous Software, Computer Vision for Targeting & Path Finding
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Organizations:

Emory Hack4Impact Director of Software Engineering • May 2022 - Present

- Create technical solutions for nonprofit organizations / Manage and lead team of developers / Own, design, and maintain infra.

Emory Robotics President • January 2021 - Present

HyperJackets Hyperloop Team / Electronics Team Lead (C++) • September 2020 - May 2022

- Motor Interface / Developing CAN communication to communicate with Hyperloop pod motors and PID control

FIRST Robotics Alum & Mentor (Java) • August 2016 - Present

Achievements:

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

Distinguished Honor Capstone Research Project (05/2020) • Adobe Photoshop Industry Certified (05/2017)

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