Rafael Piloto

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Education:

Emory University ● GPA: 3.93 ● Atlanta, GA ● August 2020 - Expected: May 2024
- Bachelor of Science in Computer Science, Minor in Quantitative Sciences
- Courses Taken: CS 253 Data Structures and Algorithms, Math 221 Linear Algebra, CS 224 Discrete Math,

New Albany High School ● New Albany, OH ● August 2016 - May 2020
- Summa Cum Laude, GPA: 4.3319
- Courses Taken: AP Computer Science A / Honors Robotics / AP Physics 1 / AP Calculus AB / AP Statistics

Work Experience:

Air Force Research Lab Student Researcher ● January 2021 - Present
- Worked to refine reinforcement learning models for a robotic manufacturing process to optimize the propeller blade inspection process at Warner Robins Air Force Base. Refactoring and abstracting model to work on all scheduling problems
- Technologies: Google Cloud Platform, Python, Reinforcement Learning, Deep Learning

NLP Suite Student Researcher ● January 2021 - Present
- NLP Suite Bundle to simplify Natural Language Processing for social scientists and non-professionals
- Implemented and Managed Version Control in project through GitHub
- Performed Quality Assurance duties such as implementing user-friendliness practices, scalability, etc
- Technologies: GitHub, Python, tkinter, Stanford CoreNLP, Wordnet, Mallet

Emory Center for the Study of Law and Religion Student Assistant ● August 2020 - Present
- Center web-developer, created digital solutions to improve team efficiency such as contact list database merger and Center web scraper for article documentation, preservation, and DOI tagging.

Projects & Skills: github/RafaelPiloto10

***A.P.O.L.L.O* Honors Capstone Research Project ● May 2019 - Present ● github/RafaelPiloto10/A.P.O.L.L.O**
- Researched efficiency and necessity for personal assistants and built my own assistant from scratch for the browser
- Technologies: JavaScript, NodeJS, BootStrap, Python , HTML, CSS, Natural Language Processing, API's

Spotify Song recommender API ● May 2019 - Present ● github/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/FRC_2019
- 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

Organizations:

FIRST Robotics (Java) ● August 2016 - Present
- FIRST Lego League Co-Founder & Mentor / Handled logistics for the team and mentored the programming team
- FIRST Robotics Challenge / Programming Lead / Collaborated, Programmed, & Tested team code applications
- Georgia FIRST Collegiate Alumni and Association (GFCAAA) Co-Founder / Mentorship for Georgia FIRST Teams

Emory Robotics ● January 2021 - Present
- President of Emory Robotics / Robotics club at Emory University / First GFCAAA Chapter

HyperJackets Hyperloop Team (C++) ● September 2020 - Present
- Motor Interface / Developing CAN communication to communicate with Hyperloop pod motors and PID control
- Simulator / Developing pod simulator to test hardware components and current software

QuestBridge Scholars Network ● August 2020 - Present

Google Computer Science Summer Institute ● July 2020 - August 2020

Achievements:

QuestBridge National College Match Scholar (11/2019-Present) ● Amazon AWS InCommunities Scholar (08/2020-Present)
Distinguished Honor Capstone Research Project (05/2020) ● HSF Scholar (06/2020-Present) ● FIRST Robotics Challenge Buckeye
Regional Finalists & Chairman's Award Winners (3/2019) ● Adobe Photoshop Industry Certified (05/2017)

Languages: English (Native) ● Spanish (Native) ● American Sign Language (Native) ● Mexican Sign Language (Native)