Alexander Joseph Montes

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EDUCATION

Rensselaer Polytechnic Institute <div align="right">**Class of 2024**</div>

Master of Science: Computer Science, Minor in Cognitive Science of Artificial Intelligence — **GPA: 3.6**

EXPERIENCE

HUNTINGTON INGALLS INDUSTRIES — **Syracuse, NY**

Software Engineer Co-Op — **January 2022 – August 2022**

- ❖ Engineered a comprehensive algorithm incorporating color, proximity, and Time of Flight LIDAR sensors and utilized embedded microcontrollers to integrate autonomous driving functionality for off-roading vehicles
- ❖ Designed, deployed, and documented a full-stack application utilizing Microsoft Power Apps, Power Automate, Power Fx and SharePoint to streamline the shipping and tracking processes for the Product Management Team
- ❖ Implemented and fully documented EZ Office's Lab-Asset Tracking Software to monitor product calibration and expiration dates, increasing office productivity by 35% and improving overall office and lab organization
- ❖ Deployed an NGINX Web Server to visualize and control Radio Frequency Chamber equipment remotely
- ❖ Developed C++ and Python scripts to automate Vertical Launch System sequences and dissect UCEU log files

PROJECTS

RENSSELAER POLYTECHNIC INSTITUTE — **Troy, NY**

Undergraduate Research Project — **May 2021 – December 2021**

- ❖ Directed the development of an interactive progressive web application for the School of Humanities, Arts, and Social Sciences allowing students to plan and register for their desired courses built with NodeJS and Django
- ❖ Improved backend unit testing utilizing Selenium's WebDriver allowing for a 20% increase in code deployment
- ❖ Developed JSON request bodies for backend CRON jobs to create survey data to AWS ElastiCache instances
- ❖ Overhauled the backend authentication routes utilizing Rensselaer's Central Authentication Service and JWTs

RENSSELAER POLYTECHNIC INSTITUTE — **Troy, NY**

Independent Research Project — **January 2021 – May 2021**

- ❖ Developed a Django semantic web application in collaboration with IBM that extended MIT's moral machine by allowing users to create and answer ethical questions with the utilization of machine learning microservices
- ❖ Built a RESTful API in Django to handle creating, fetching, and verifying poll data passed through survey models
- ❖ Incorporated a SQL filtering, search ranking, and dynamic data extracting microservice improving runtime by 8%
- ❖ Deployed an AWS EC2 instance running Ubuntu handling a CI/CD pipeline incorporating GitHub Actions

RENSSELAER POLYTECHNIC INSTITUTE — **Troy, NY**

UNDERGRADUATE RESEARCH PROJECT — **August 2020 – May 2021**

- ❖ Spearheaded the iOS development team of three students providing mentorship in both system and unit testing
- ❖ Overhauled user experience pages enhancing mobile accessibility incorporating W3C WAI readiness guidelines
- ❖ Augmented a user management dashboard for internal school administrators to audit and monitor reported users
- ❖ Extended Google Firebase to support user authentication engulfing 2FA on iOS and Android personal devices

TECHNICAL PROFICIENCY

Programming Languages: C, C++, Python, Java, JavaScript, ReactJS, HTML, PostgreSQL, MS Power Fx, Swift
Operating Systems: macOS, iOS, watchOS, tvOS, Microsoft Windows, Linux, Ubuntu, Raspbian, Debian
Other: Git, GitHub, Firebase, ElastiCache, EC2, S3, Docker, Heroku, Adafruit, Homebridge, LLDB, Clang
Recognition: Rensselaer Dean's Honors List, Rensselaer Leadership Award, Rensselaer Recognition Award, Theta Xi Fraternity, National Society of Leadership and Success