

# Alexander Joseph Montes

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## EDUCATION

<b>Rensselaer Polytechnic Institute</b>	<b>2023 - 2024</b>
<b>Master of Science</b> in Computer Science	<b>GPA: 4.0</b>
<b>Rensselaer Polytechnic Institute</b>	<b>2019 - 2023</b>
<b>Bachelor of Science</b> in Computer Science, Minor in Cognitive Science of Artificial Intelligence	<b>GPA: 3.6</b>

## EXPERIENCE

AMAZON WEB SERVICES, INC.	<b>Bellevue, WA</b>
<b>Software Development Engineer Internship</b>	<b>June 2023 – August 2023</b>
<ul style="list-style-type: none"><li>❖ Re-engineered an entire integration testing suite for a React web application by architecting a granular end-to-end integration testing framework utilizing Cypress and TypeScript, and by providing a full boilerplate implementation</li><li>❖ Streamlined pre-production integration testing and logging with automation via AWS Fargate, CodePipeline, and S3</li><li>❖ Designed GraphQL queries and mutations to optimize HTTP payloads for AWS Lambda function deployments</li><li>❖ Developed and showcased an operational proof-of-concept testing suite through an organization-wide demo</li><li>❖ Participated in daily Scrum stand-up meetings, weekly design reviews, and bi-weekly sprint/story planning sessions</li></ul>	
HUNTINGTON INGALLS INDUSTRIES, INC.	<b>Syracuse, NY</b>
<b>Software Engineer Co-Op</b>	<b>January 2022 – August 2022</b>
<ul style="list-style-type: none"><li>❖ 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</li><li>❖ 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</li><li>❖ 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</li><li>❖ Deployed an NGINX Web Server to visualize and control Radio Frequency Chamber equipment remotely</li><li>❖ Developed C++ and Python scripts to automate Vertical Launch System sequences and dissect UCEU log files</li></ul>	

## PROJECTS

RENSSELAER POLYTECHNIC INSTITUTE	<b>Troy, NY</b>
<b>Undergraduate Research Project</b>	<b>May 2021 – December 2021</b>
<ul style="list-style-type: none"><li>❖ 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</li><li>❖ Improved backend unit testing utilizing Selenium's WebDriver allowing for a 20% increase in code deployment</li><li>❖ Developed JSON request bodies for backend CRON jobs to create survey data to AWS ElastiCache instances</li><li>❖ Overhauled the backend authentication routes utilizing Rensselaer's Central Authentication Service and JWTs</li></ul>	
RENSSELAER POLYTECHNIC INSTITUTE	<b>Troy, NY</b>
<b>Independent Research Project</b>	<b>January 2021 – May 2021</b>
<ul style="list-style-type: none"><li>❖ 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</li><li>❖ Built a RESTful API in Django to handle creating, fetching, and verifying poll data passed through survey models</li><li>❖ Incorporated a SQL filtering, search ranking, and dynamic data extracting microservice improving runtime by 8%</li><li>❖ Deployed an AWS EC2 instance running Ubuntu handling a CI/CD pipeline incorporating GitHub Actions</li></ul>	

## TECHNICAL PROFICIENCY

**Programming Languages:** Python, JavaScript, TypeScript, C++, C, C#, Java, React, Vue, HTML, CSS, PostgreSQL, Microsoft Power Fx, Excel VBA, GraphQL, Swift, Dart

**Services:** Git, Django, Docker, Postman, Cypress, JEST, EC2, S3, Lambda, Fargate, ElastiCache, CloudWatch, SQS, CloudFront, CloudFlare, Netlify, Firebase, Heroku, Flask, Tensorflow, NLTK, PyTorch, Pandas, SciPy, Selenium