Alejandra J. Perea Rojas

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EDUCATION

Harvard University   Cambridge, MA
- Bachelor of Arts in Computer Science; Secondary in Physics.   Anticipated: May 2024
- Relevant projects:
  - Turing-complete OCaml interpreter, a C++ mini-OS WeensyOS, a bash shell in C++, and a Python Ghost AI.
- Relevant coursework:
  - Systems Programming (CS61), Artificial Intelligence (CS182) Abstraction and Design in Computation (CS51), Intro to Algorithms (CS120), Applied Linear Algebra (AM120), Intro to Probability (STAT110).

EXPERIENCE

Quantum Software Developer Intern   May-Aug 2023
IBM   Yorktown Heights, NY
- Contributed to job compilation efficiency in Qiskit Runtime by implementing a Go endpoint for owner-verified deletion of compiled quantum payloads, complemented by a mock API for unit testing and to verify the functionality of the endpoint.
- Augmented Qiskit Runtime's reliability by designing over 20 error types and 30 unit tests. Implemented various forms of error propagation, logging, and handling across different Python codebases, including the Near-Time Compute services.

Chief Technical Officer & Co-Founder   Apr-May 2023
ENTREVISTA   New York, NY
- Created and launched the MVP of Entrevista by developing a web-based JavaScript recorder and text-to-speech that simulates a real-time casing interview via a REST API framework and a Python video-processor, an open-source text-generator, and AWS S3 handlers. Deployed in the span of a month, leveraging Heroku, GitHub, and AWS.
- Earned a finalist position in the Y-Combinator application with two Co-Founders, initiating team and user acquisition.

Software Engineer Intern   Jun-Dec 2022
TEAMCORE LAB AT HARVARD UNIVERSITY   Cambridge, MA
- Boosted efficiency and reliability of the PAWS SMART API by developing a Python HTTP API. This facilitated simultaneous multi-case testing, supplanted manual Postman HTTP requests, and yielded substantial time savings.
- Broadened the testing scope and enhanced error handling by leveraging Azure for data storage and creating 15 additional mock QGIS parks, enabling bulk request processing, thorough testing, and accelerating the integration of new features.

Drones and Remote Sensors Intern   May-Aug 2022
WILDLIFE CONSERVATION SOCIETY   Cambridge, MA
- Developed an article processing interface with Python and SQL for Google News and Scholar. Contributed with over 1,500 parsed articles from the first use of the program, which helped identify quality sources to start the WCS Library.
- With the parser algorithm, researched and drafted an 8-page white-paper on state-of-the-art AI video processing and conservation tools that helped advance multiple projects at WCS throughout months after the internship.

ACTIVITIES

Teaching Fellow   Sep-Dec 2022
HARVARD UNIVERSITY   Cambridge, MA
- Facilitated a Systems Programming class of about 200 students by section and office hours of 20+ students.
- Covered 6 topics using C++ and GNU: data memory and representation, assembly, kernel, caching, shell, and threading.

DIB Advocacy Director   Aug-Dec 2022
HARVARD WOMEN IN COMPUTER SCIENCE   Cambridge, MA
- Oversaw and collaborated with 8 members on initiatives to promote inclusion. With a budget of approximately $300, helped organized events throughout the semester, providing resources and support to diverse groups of over 100 students.

SKILLS

Programming: Proficient (3+ years) in Python and C++. Experienced (1+ years) with Go, Java, OCaml, and SQL.
Development: Proficient (3+ years) in HTML/CSS. Experienced (1+ years) with PHP, JavaScript, TypeScript, and React.
Environments: Skilled with Azure, AWS, Docker, Qiskit, OpenAI, Linux, MATLAB, GNU, and Assembly.
Language: Fluent in Spanish (native), intermediate in Mandarin Chinese, and elementary in Japanese.