MARTÍN REYES HOLGUÍN

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EDUCATION

HARVARD UNIVERSITY Cambridge, MA
S.M, Computational Science & Engineering | GPA: 4.0/4.0 May 2023
Relevant Coursework: Machine learning, complex and fourier analysis, stochastic processes.

HARVARD UNIVERSITY Cambridge, MA
A.B, Applied Mathematics | GPA: 3.8/4.0 May 2023
Relevant Coursework: Multivariable calculus, linear algebra, differential equations, real analysis, dynamical systems, natural language processing, data structures and algorithms, theory of computation, probability and inference, programming languages.

WORK EXPERIENCE

INCOMING SUMMER QUANTITATIVE ANALYST INTERN @ CITI New York, NY | June 2022 – Present
Will build mathematical and computational models for financial asset management.

RESEARCH ASSISTANT @ HARVARD GROWTH LAB Cambridge, MA | Feb. 2021 – Present
Implements recommender systems collaborative filtering models to recommend jobs and products for developing countries to propel their economies. Co-authors a research paper with Dr. Andrés Gómez-Liévano.

DATA SCIENCE INTERN @ VIGILAMOS TIERRA MÉXICO Mexico City, Mexico | Jan. 2021 – Jan. 2021
Coded a function to make PDF reports of crime in municipalities and states in Mexico for their webapp. Evaluated ML models.

COUNSELOR AND DIRECTOR OF TECHNOLOGY @ COLLEGE SCHOLAR Remote | Nov. 2019 – Present
Counsels students from underprivileged backgrounds in Latin America to study in colleges like Harvard, MIT, Stanford, etc. Created Google app scripts to automate processes. Developed the webpage and student portal.

CONTENT CREATION SPECIALIST @ ENGAGING EDUCATION Remote | Nov. 2019 – Dec. 2020
Programmed virtual chatbots in YAML that teach interactive math lessons and explain math problems for the Lana app.

UNDERGRADUATE FELLOW @ DEREK BOK CENTER Cambridge, MA | Oct. 2019 – Jun. 2020
Created webapps using Cinema 4D, Unity, D3.js for classes at Harvard to make learning more interactive.

LEADERSHIP AND TEACHING

COMPUTER SCIENCE TEACHING FELLOW @ HARVARD Cambridge, MA | Dec. 2021 – Present
Develops curriculum for the new class, COMPSCI 96: Machine Learning for Social Good. Mentors a team to model the amount of respirable crystalline silica from spectral data for the CDC. Hosts office hours, leads workshops, and grades assignments.

MATHEMATICS COURSE ASSISTANT @ HARVARD Cambridge, MA | Jun. 2021 – Dec. 2021
Graded homework, led section, and hosted office hours for fall and summer versions of MATH 21A: Multivariable Calculus.

CHOREOGRAPHER @ HARVARD CANDELA LATIN DANCE TROUPE Cambridge, MA | Sep. 2020 – Present
Designs salsa, bachata, and merengue choreographies. Teaches social and performance classes to 40+ students. Led team to classify and perform on Harvard Cultural Rhythms 35 and 36. Invited to the UPenn salsa conference.

CO-PRESIDENT @ HARVARD ORGANIZATION FOR LATIN AMERICA Cambridge, MA | Sep. 2020 – Present
Coordinated a fundraiser to help underprivileged youth in Latin America. Organized social and academic events.

PROJECTS

POMBO EDUCATION
Developed an app that diagnoses educational inefficacies in the classroom. Designed the UI/UX for the application, a predictive model trained on data from 10,000 schools in Colombia, the firebase infrastructure, etc.

QUESTIONS TO ATIS SQL QUERIES
Created a question to SQL queries translation system using naïve Bayes, rule-based, and seq2seq encoder-decoder models.

MINI-ML LANGUAGE INTERPRETER
Implemented three interpreters of a subset of the OCaml language, each with a different semantic assumption.

DISCRETE MATH EXPLORABLE EXPLANATIONS
Created RShiny webapps that calculated permutations, operations, conversions, subgroups, and Cayley graphs of different important groups. Created visualizations of Euclid's GCD, Fleury's, Prim's, and Kruskal's algorithms.

CHUSPA APP
Developed iOS app that scans supermarket products and displays eco-footprint from life cycle assessment models.

SKILLS

Programming languages: Python, R, SQL, OCaml, LaTeX, JavaScript, HTML/CSS, Swift, Java, C, MATLAB
Libraries: Numpy, Pandas, Matplotlib, RShiny, Scikit Learn, PyTorch, TorchText, SciPy, Beautiful Soup, D3JS
Languages: Spanish, English, and French (Fluent); Chinese (Intermediate Proficiency)