
MARTÍN REYES HOLGUÍN

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EDUCATION

HARVARD UNIVERSITY

S.M, Computational Science & Engineering

Relevant Coursework: Machine learning, complex and fourier analysis, stochastic processes.

Cambridge, MA

May 2023

HARVARD UNIVERSITY

A.B, Applied Mathematics

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.

Cambridge, MA

May 2023

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)