

SANTIAGO BORREGO

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EDUCATION

Massachusetts Institute of Technology GPA: 4.8

Cambridge, MA

Pursuing B.S. in Mathematics, B.S. in Artificial Intelligence and Decision Making, Minor in Economics

Class of 2026

- Relevant Coursework: Computational Thinking and Data Science, Fundamentals of Programming, Linear Algebra, Machine Learning, Differential Equations, Mathematics for Computer Science, Probability and Random Variables, Real Analysis, Algorithms, Statistics, Optimization Methods, Economic Applications of Game Theory, Theory of Computation

EXPERIENCE

MIT Sea Grant

Cambridge, MA

Machine Learning Researcher

January 2024 – Present

- Integrated a classifier built using OpenCV and Scikit-Learn with a PyTorch-based deep learning object detection framework.
- Built a comprehensive dataset in collaboration with experts, using Roboflow to create pixel-level annotations.
- Achieved over 80% accuracy in detection and classification of microscopic larvae images.
- Awarded Dean A. Horn Award for UG Study in Marine Research, best class poster at the MIT Biotech Poster Session.
- Co-authoring methods paper on research and findings.

Politecnico Di Milano Data Science Lab

Milan, Italy

Machine Learning Researcher

May 2024 – September 2024

- Trained and deployed text to image models (Stable Diffusion/Dreambooth) to build image dataset using Python and PyTorch.
- Generated over 3000 images representing 30 distinct concepts trained using a variety of data sources.
- Conducted statistical tests using TCAV to evaluate capacity of neural networks to learn concepts from synthetic and real images.
- Dataset achieved cosine similarity scores over 0.8 demonstrating the potential use of synthetic images for concept-based methods.

Royalty Pharma

New York City, NY

Data Analytics Intern

June 2023 – August 2023

- Managed and made queries to a 40 TB database using Python and SQL as part of the Strategy & Analytics team.
- Analyzed claims data and found differentiating features between patient groups using libraries such as Scikit-Learn and XGBoost.
- Built pipeline to collect and condense entire medical history for all patients who had a certain condition using the Pandas library.
- Collected and processed clinical trials data using Label Studio to fine-tune a BERT model for Named Entity Recognition (NER).

JACKS Realty Investment Group

Greenwich, CT

Real Estate Investment Analyst Intern

Feb 2022 – Aug 2022

- Identified potential investment opportunities and optimized rental pricing strategies using Microsoft Excel.
- Created annual report for investors on \$40 million worth of properties analyzing growth and opportunity by region.
- Communicated with clients and handled concerns in both English and Spanish.

EXTRACURRICULARS

MIT Sandbox Program

Cambridge, MA

Data and Machine Learning Engineer

Jan 2024 – Present

- Collected and analyzed biometric and survey data from high school athletes to assess relation between biometrics and performance using Pandas and Matplotlib for data processing and presentation.
- Working to develop machine learning models using TensorFlow that can provide insights to improve performance.
- Connecting to the API for different wearables worn by MIT Track and Field athletes to collect detailed and continuous data.

Theta Tau Professional Engineering Fraternity – Eta Chapter

Boston, MA

Brotherhood Chair, Intramural Chair

September 2022 – Present

- Organized alumni event attended by over 60 members and alumni each semester.

SKILLS & INTERESTS

Languages: Spanish (Native-Fluency)

Technical: Python, SQL, PyTorch, Tensorflow, Pandas, LaTeX, Julia, Microsoft Excel

Interests: Soccer, Rugby, Music, Travel