

Gabriela M. Miranda Bortolatto

428 Memorial Drive • Cambridge, MA 02139

gmmirand@mit.edu · +1 (857) 757-0347 · +595 984 277948

Education

MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT)

Cambridge, MA

Candidate for B.S. in Computer Science and Engineering and B.S. in Economics. GPA: 4.8

Present

- Relevant Coursework: Software Construction, Design and Analysis of Algorithms, Advanced Algorithms, Computer Structures and Systems Engineering, Programming, Web Development and Design, Machine Learning, Macroeconomics, Challenges of World Poverty, Microeconomics, Computer Vision, Algorithmic and Human Decision-Making, Interactive Data Visualization.

Professional Experience

Itaú Unibanco Holding S.A.

São Paulo, Brazil

Summer Analyst – Credit Risk Modeling (IRB Project)

Summer 2025

- Collaborated with the Credit Risk Modeling team to review and enhance IRB-compliant risk classification models for a portfolio exceeding R\$580B.
- Identified and addressed model misclassifications affecting high-risk regular customers, improving model accuracy and relevance. Applied modeling and optimization techniques to support strategic credit decisions, regulatory compliance, and risk management enhancement. Improve risk differentiation for clients with deteriorated credit profiles.

Abdul Latif Jameel Poverty Action Lab (J-PAL), MIT

Cambridge, MA

Research Assistant – Data Analysis & Policy Writing

Present

- Support data cleaning, exploratory analysis, and documentation for research on the societal impacts of AI using Python/Stata to organize large datasets and generate preliminary empirical insights.
- Develop an NLP-based agent that ingests and standardizes a large, noisy dataset of J-PAL-affiliated and partner researchers; performs entity resolution and extracts structured research interests into a searchable database.
- Enable natural-language querying and matching of researchers to topics/projects to streamline expert discovery and literature scoping for policy-facing work.

Department of Computer Science at MIT

Cambridge, MA

Research Assistant – Algorithm Development

2024 – 2025

- Developed an algorithm to transform sets of vectors using low-level primitives, targeting applications in auto-vectorizing compilers. Results include an algorithm of the same asymptotic complexity as one proposed by Intel.
- Work involved mathematical analysis, algorithm design, performance optimization, and a deep understanding of x86, Intel, ARM, and other architectures.

Department of Computer Science at MIT

Cambridge, MA

Teaching Assistant – Mathematics for Computer Science

2025 – Present

- Facilitate recitation sections and support instruction for MIT's core course in discrete mathematics, including logic, proofs, combinatorics, number theory, graph theory, and probability.
- Evaluate assignments and examinations, and provide individualized academic assistance through office hours and consultations.

Department of Nuclear Physics at MIT

Cambridge, MA

Research Assistant – Machine Learning and Modeling

Summer 2024

- Used Machine Learning and Nuclear Physics concepts and tools (Pytorch) to create Models to detect Axion Signals in a time series frequency. Proposed and helped discard approaches to potential solutions for models' optimization.

Class Projects

6.4500 – Web Design: Developed a full-stack WhatsApp-like messaging app with features for event planning informed by user surveys. Designed both front-end and back-end for seamless real-time communication and usability.

6.1020 – Software Construction: Built a full-stack web-based board game, including a robust backend server capable of supporting multiple concurrent games. Recognized for accuracy, correctness, and a highly intuitive user interface.

6.1800 – Computer Systems: Proposed and defined a comprehensive network protocol for satellite-to-satellite communication. Designed system behaviors for all edge cases and evaluated performance trade-offs, reliability, and design flaws.

Honors

Record-breaking Paraguayan Team Score (IMO 2022)

Silver Medal: PAGMO 2021, Mayo 2020

Bronze Medal: Cono Sur Olympiad

Honorable Mentions: IMO 2022, Iberoamerican Math Olympiad 2022, IGO 2022

Skills, Interests, Leadership, and Additional Education

Skills: Python, C, C++, Assembly, PyTorch, HTML, CSS, JavaScript, R, SQL, TypeScript, LaTeX, AWS, Jupyter, Git

Languages: Spanish (native), Portuguese (fluent), English (proficient)

Interests: Algorithm Design, Software Engineering, AI, Finance, Development Economics

Leadership: Founder & First Vice-President, MIT Paraguayan Association; Former Co-coordinator, PINO (Paraguayan STEM Olympiads bootcamps; 150+ students, 40+ volunteers); Social Chair and Secretary, Tau Delta Psi Fraternity.

Additional Education: Paraguayan National Degree of Superior Piano and Musical Language Teacher, with Honors.