

# Anthony Baez

703-340-6753 | [acbaez@mit.edu](mailto:acbaez@mit.edu) | [antbaez9.github.io](https://github.com/antbaez9) | [linkedin.com/in/anthony-c-baez](https://linkedin.com/in/anthony-c-baez)

## EDUCATION

---

### Massachusetts Institute of Technology

*Masters of Engineering in Artificial Intelligence and Decision Making*

Cambridge, MA

2024 – Present

### Massachusetts Institute of Technology

*Bachelor of Science in Artificial Intelligence and Decision Making*

Cambridge, MA

2021 – 2024

- **GPA:** 4.8/5.0

## COURSEWORK

---

**Machine Learning:** Introduction to Machine Learning; Representation, Inference, and Reasoning in AI; Advances in Computer Vision; Quantitative Methods for Natural Language Processing

**Programming:** Fundamentals of Programming; Introduction to Algorithms

**Math:** Linear Algebra and Optimization; Optimization Methods; Probability and Random Variables

## RESEARCH

---

### MIT Research Laboratory of Electronics

*MEng Researcher*

Jan 2024 – Present

Cambridge, MA

- Developing novel encoding method to enable time-series reasoning in LLMs
- Supervised by Prof. Luca Daniel

### MIT Research Laboratory of Electronics

*Advanced Undergraduate Researcher*

Sept 2023 – Dec 2024

Cambridge, MA

- Developed novel projection method for guaranteeing conservation laws in a Physics-Informed Neural Network
- Principal author on paper accepted to Data-driven and Differentiable Simulations, Surrogates, and Solvers Workshop @ NeurIPS 2024
- Supervised by Prof. Luca Daniel

### Universitat Pompeu Fabra NLP Research Group

*Undergraduate Researcher*

June 2023 – Aug 2023

Barcelona, Spain

- Supported by MIT International Science and Technology Initiative (MISTI)
- Fine-tuned LLaMA on a lexical simplification task to create LSLlama, a novel and more efficient LLM lexical simplification model
- Principal author on paper accepted to Second Workshop on Text Simplification, Accessibility and Readability @ EMNLP 2024

### MIT Lab for Computational Physiology

*Undergraduate Researcher*

June 2022 – Aug 2022

Cambridge, MA

- Applied contrastive learning techniques to different classes of machine learning models to improve detection of cardiac arrhythmia for use in bedside monitors
- Adapted model to different ECG waveform datasets, conducted dataset and error analysis to improve models

## PUBLICATIONS

---

**Guaranteeing Conservation Laws in Physics-Informed Neural Networks** 2024

*Anthony Baez, Wang Zhang, Ziwen Ma, Subhro Das, Lam M Nguyen, and Luca Daniel*

Data-driven and Differentiable Simulations, Surrogates, and Solvers Workshop @ NeurIPS 2024

**LSLlama: Fine-tuned LLaMA for Lexical Simplification** 2023

*Anthony Baez and Horacio Saggion*

Second Workshop on Text Simplification, Accessibility and Readability @ EMNLP 2023

## EXPERIENCE

---

**DeepAI**

June 2024 – Aug 2024

*Machine Learning Research Intern*

*San Francisco, CA*

- Created Distributask, a Python package that simplifies managing distributed rendering tasks
- Used Distributask to create a data pipeline to automatically render Blender scenes
- Fine-tuned open source text-to-video model on mixed real-synthetic dataset to improve spatial understanding