# Evan P. Taylor

646-713-3321 | evan.taylor@bc.edu | evantaylor.io | linkedin.com/evanptaylor

# EDUCATION

# **Boston College**

Chestnut Hill, MA

Mathematics B.A., Computer Science B.A.

Aug. 2021 - May 2025

• Relevant courses: Machine Learning, Deep Learning, Computer Vision, Linear Algebra, Differential Equations, Differential Geometry

## The Browning School

New York, NY

High School; Graduated Cum Laude

Aug. 2017 - May 2021

• SAT: 1510

# Experience

#### **Developer Intern**

June 2024 - present

Driftwood Heritage Holdings

Remote

- Independently developed and deployed a web-scraping Flask application on AWS (Elastic Beanstalk), eliminating the need for an \$1,800/year third-party service by replicating its functionality in-house.
- Automated lead generation workflows, reducing data collection times from 5-10 minutes per task to just 1 minute, saving approximately 30 man-hours per week and substantially cutting operational costs.
- Designed an intuitive user interface using HTML/CSS and integrated Selenium for automated web scraping, ensuring robust and cost-effective data retrieval directly aligned with business needs.
- Maintained and optimized Python scripts and AWS infrastructure to ensure continuous, reliable performance of the web application.

#### Generative AI Model Trainer and Evaluator

Feb 2024 - June 2024

Scale AI

Remote

- Assisted in training and evaluating generative AI models using reinforcement learning from human feedback (RLHF).
- Formulated complex, quantitative queries tailored to test the reliability and adaptability of the models.
- Rigorously reviewed model responses to check for logical errors and hallucinations—involving writing robust test cases to confirm generated code works efficiently and effectively.
- Introduced a novel form of complex prompts that significantly enhanced the depth and adaptability of model training.

#### Projects

# Gradient Descent on Riemannian Manifolds | Research Paper

April 2024

- Researched and theoretically verified a novel adaptation of the gradient descent algorithm that utilizes the intrinsic geometric properties of Riemannian manifolds, effectively improving optimization techniques for data naturally residing on manifolds.
- Leveraged differential geometry constructs such as geodesics and exponential maps, enabling efficient minimization
  paths on manifolds, which are crucial for enhancing the performance of machine learning models in non-linear
  domains.
- Conducted rigorous theoretical analysis to validate the efficacy of the Riemannian gradient descent method over traditional optimization approaches.

# GitHub Repository Chat | Python

December 2023

- Implemented a conversational interface allowing users to interact with GitHub repositories using natural language using Retrieval Augmented Generation (RAG) techniques.
- Utilized the LangChain framework to streamline document loading, parsing, and code splitting for efficient embedding.
- Integrated OpenAI's text-embedding model to embed processed chunks and their GPT-4 model for chat.
- Utilized the Chroma's vector database to store and quickly retrieve code chunks during user interactions.
- Applied strict rule-based strategies to guide the chat component through complex problems and to provide multiple perspectives.