Benjamin (Benny) Grey

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EDUCATION

Massachusetts Institute of Technology Expected Graduation: June 2026 - On track to graduate in 3 years instead of 4

- **Candidate For Bachelor of Science in Computer Science and Engineering** Cambridge, MA
- Relevant Coursework: Algorithms, Machine Learning, Fundamentals of Programming, Computation Structures, Low Level Programming in C and Assembly, Mathematics for Computer Science, Linear Algebra
- Relevant Planned 2024-25 Coursework: Software Construction, Design and Analysis of Algorithms, Computer Systems Engineering
- GPA: 5.0

LANGUAGES AND TECHNOLOGIES

- Python, C, Java, JavaScript, Typescript, React, Next.js, Django, SQL, Pandas, BigQuery, Google Cloud Run, HTML, CSS, Redux, Bash, LaTeX, Matplotlib, Plotly

EXPERIENCE

MIT Fundamentals of Programming Class – ***Lab Assistant*** Cambridge, Ma, Fall 2024

- Assist students in learning and debugging Python mini-projects for two three hour sessions per week after self-completing the mini-projects.

Anywaypay, Inc. Remote

Software Engineer Summer 2024

- Developed back-end cloud functions to process and analyze analytics data and leveraged large language models to extract and interpret relevant information.
- Implemented front end custom themes features.

MIT Computer Science and Artificial Intelligence Lab (CSAIL) Cambridge, Ma

Undergraduate Researcher Summer 2024

- Contributing to Professor David Karger's Haystack Group's research on integrating NB, a web application for facilitating classroom discussions through inline annotations to online texts, with Sefaria, an online library of Jewish texts.
- Worked on the integration process, using new software and web development skills.

MIT Institute for Soldier Nanotechnologies Cambridge, Ma

Undergraduate Researcher Spring 2024

- Developed and optimized numerical methods for fracture modeling through programming and algorithms in C++.
- Analyzed simulation results to enhance understanding of crack physics.

QuesTek Innovations LLC Evanston, IL

Materials Design Engineer Intern June-August 2019, 2020, 2022

- Developed software and models for design of new high-performance materials
- Executed end-to-end development on new materials technology website from backend architecture and data to frontend design.
- Performed data analysis to implement Bayesian inference and Markov Chain Monte Carlo (MCMC) algorithm for the uncertainty quantification and propagation of various materials science models

Fermilab QuarkNet Muon Underground Shielding Experiment (MUSE), Batavia & Skokie, IL

Co-lead Author and Editor 2018-2020

- Measured effects of structural overburden of Fermilab MINOS tunnel access shaft on muon flux, using installed and monitored cosmic ray muon detectors; experiment found that muon flux decreases as a function of distance from the access shaft in Fermilab MINOS tunnel; data collection and analysis could be used to benefit Fermilab underground neutrino detector. Publisher paper and presentation at AAPT
- Winkler, E., **Grey, Benjamin Z.** (co-lead authors), et al. (2020). "Beyond The Classroom: Profiling Muon Flux in Relation to Overburden in Fermilab's MINOS Tunnel," *The Physics Teacher,* 31 January 2022, Volume 60, Num 2