BRADY J. DARBY

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EDUCATION

Massachusetts Institute of Technology, Cambridge, MA Sept. 2019-May 2024

- **GPA:** 5.0/5.0
- **Candidate for master's degree in Computer Science and bachelor's degree in Mathematics**
- **Coursework:** Algorithms and Data Structures, Artificial Intelligence, Computational Thinking & Data Science, Programming Fundamentals, Math for Computer Science, Multivariable Calculus, Linear Algebra, Differential Equations, Probability and Random Variables, Microeconomics, Behavioral Economics

McQuaid Jesuit High School, Rochester, NY Sept. 2012-May 2019

- **GPA:** 100/100; **ACT:** 35

EXPERIENCE

NASA Jet Propulsion Laboratory, Pasadena, CA May 2022 (ongoing)

Mars 2020 Perseverance, Sampling and Caching

Robotics Intern

- Developed tactical tool to analyze heater compensation critical to rover health.
- Improved automation of both tactical and strategic data pipelines in Python.
- Designed computer vision algorithms for detecting corners, edges, and surfaces of drill bits and teeth onboard rover.
- Implemented data pipeline to assess levels of mechanical wear on rover drills and in turn inform tactical and strategic mission operations.

55 Institutional Partners, LLC, Boston, MA February 2022-June 2022

Wholly owned subsidiary of J.P Morgan Asset Management

Quantitative Research Intern

- Researched strategies for automated portfolio manager and tax-optimized investment engine.
- Utilized Python-based API to gather relevant data for team research.
- Improved communication between Python-based API and R-based analytical tools using reticulate.
- Designed data visualization tool in R shiny to plot security price and risk figures for firmwide analysis.

Massachusetts General Hospital - Ting Laboratory, Charlestown, MA June 2021-October 2021

Cancer Research Laboratory

Data Engineer

- Generated differential expressions to understand relative gene activations of different cancers and cells.
- Deconvolved tissue samples into proportions of 5 different cell types.
- Automated and optimized pipeline for analysis of 10 sets of bulk RNA sequence data using R.
- Informed future direction of lab research using my analysis.

M.I.T. Computer Science and Artificial Intelligence Laboratory, Cambridge, MA May 2020-October 2020

Artificial Intelligence-based Approaches for Precision Indoor Agriculture

Research Analyst / Software Developer

- Developed both a baseline and refined mechanistic model for plant growth.
- Implemented models in Python using Git for source control.
- Compared mechanistic model with industry-leading growth models to earn additional project funding.

PERSONAL

- **Proficiencies:** Python, R, React, HTML, Figma, Java, C++, Solidity, SQL, Blender, Git
- **Activities/Leadership:** Tau Beta Pi, Eta Kappa Nu, Entrepreneur, MIT Varsity Volleyball, Sloan Blockchain Club, Chi Phi Fraternity, Summer Camp Counselor