

Brendan Q. Flaherty

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Education

California Institute of Technology | Caltech | Pasadena, CA

Expected June 2026

- B.S. Computer Science and B.S. Business, Economics, Management
- GPA: 4.1/4.0
- Coursework: Introduction to Finance and Economics (Quantitative), Data Science in Economics, Algorithms, Programming Methods, Software Design, Mathematical Foundations of CS, Machine Learning & Data Mining, Probability and Statistics, Calculus of Several Variables, Differential Equations, and Linear Algebra
- Future Coursework (Next Term): Probability Models, Options, Applied Data Analysis, Computing Systems

Lake Forest Academy | Lake Forest, Illinois

May 2022

- Awards/Stats: National Merit Finalist Scholarship, Illinois State Scholar, Cum Laude Inductee, 36 ACT, 4.17/4.0

Work Experience

Machine Learning Research Fellow | EPFL | Sion, Switzerland

Summer 2024

- Developed complex data pipeline to ingest 2,000+ camera trap videos and effectively run detection/tracking software frame by frame. Engineered and created scripts to optimally generate animal tracks and store valuable metadata.
- Working on the software architecture of this project gives me experience in large-scale data environments.
- Improved animal behavior learning model with the adjustments I made to the pipeline. GitHub will be published to help ecologists and conservationists in the future. Received grant to conduct this research.

Data Science Intern | LIV Golf | New Jersey and Boston

Summer 2022/2023

- Analyzed consumption/waste data to pioneer the first quantitative report analyzing impact of these golf events.
- Developed road signage plan to coordinate movement of 10,000+ fans.

Relevant Projects

Sports Analytics Models for Prediction

2024

- Developed algorithms to give edge in prediction of sporting outcomes. Baseball: worked with large amounts of data to simulate matchups and full games. Basketball: built neural networks to predict player performance.
- Managed risk and found optimal betting strategies to generate sizable return.

Medical Imaging ML Project for CheXpert Dataset

Spring 2024

- Developed an ensemble learning method aggregating many different models to lower MSE of prediction on dataset of 100,000+ chest x-rays for numerous pathologies. Placed top 5 in Caltech competition for performance.

Evaluating the Future Direction of Chinese Financial Policy

Fall 2024

- Developed quantitative report on recent government actions in China. Analyzed data in relation to LGFVs, the real estate sector, and investment in research and development. Presented results to class.

Fruit Madness Video Game

Spring 2024

- Created and coded in-depth video game in C. Sprites, sound effects, graphics, physics engine, code optimization, and many other aspects were studied in-depth. Experience in software engineering.

Leadership and Other Experience

Caltech Baseball Team

Fall 2022 – Present

- Pitcher and Infielder on NCAA team. 2024 MVP, 2023 Newcomer of the Year

Irish National Baseball Team

Summer 2024 - Present

Fleming House | Caltech

Fall 2022 – Present

- House Griller and Waiter – Organize daily dinners to serve house members.
- Athletics Manager – In charge of weekly athletic events to engage 100+ house members.
- Dean's Tutor – Help students in CS, math, and physics classes.

Susquehanna International Group Trading Discovery Day

Spring 2024

- Chosen to attend a weekend to learn new skills as a trader and gain experience in the field.

Skills and Interests

- Skills: Python, Java, C, Mathematica, Git, Data Science, ML
- Interests: Poker, Physics, Sports Betting, Stock Market, Autograph Baseball Card Collector