Brendon Bazzani

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Education

Dartmouth College, Hanover, NH **Jun. 2028**
First Generation Student Pursuing Bachelor of Arts, intended Double Major in Economics and Mathematics **GPA 3.75**
Relevant Coursework: Advanced Analysis, Probability Theory, Partial Differential Equations, Numerical Methods, Python Programming, Object-Oriented Programming, Abstract Algebra, Number Theory, Statistical Analysis, Combinatorics, Calculus, Linear Algebra, Lie Groups, Functional Analysis, Dynamical Systems, Evolutionary Game Theory, Measure Theory, Economics

Tuck School Of Business Bridge Program, Hanover NH **Dec. 2025**
Participated in a highly selective 3-week quantitative business program taught by MBA faculty, providing an in-depth introduction to accounting, finance, marketing, strategy, microeconomics, leadership, and entrepreneurship. Performing team-based valuation analyses of companies, which includes financial and strategic assessments, stability analysis, DCF analysis, and a presentation to industry executives.

Highland High School, Gilbert, Arizona **Jan. 2024**
Honors/Awards: (Ranked 1/673) Golden Scholar, Dean's List **GPA 4.9**

Professional Experience

Stochastic Differential Equations Research, Dartmouth College **Jun. 2025 - Present**

- Conducted research on machine learning and stochastic differential equations to design adaptive SGD optimization methods that improved stability and convergence on complex training problems.
- Developed a Hawkes process based learning rate schedule that accelerated training on large, chunked datasets for problems such as transaction risk scoring, demand forecasting, and web traffic modeling.
- Built and evaluated models using PyTorch and XGBoost, applying advanced linear-regression techniques to generate visualizations that clarified performance tradeoffs for diverse datasets.

Computational Neuroscience Research, Arizona State University **Jun. 2022 - Jun. 2024**
Co-Author of Research Paper in Collaboration with ASU Professor

- Applied quasi-static analysis to dendritic spine heads exhibiting relaxation oscillations, leading to a reduction of the full cable model to a nonlinear integro-partial differential equation.
- Implemented computational solutions using Python to solve three-dimensional nonlinear integro-partial differential equations via finite difference and finite element schemes like homemade Crank-Nicholson methods.
- Performed stability analysis of numerical solutions and explicit solutions to validate novel findings.

Jane Street, NYC New York **Summer 2024**

- Participated in Jane Street's Academy of Math and Programming (AMP), a 5-week summer program hosted in NYC. AMP's rigorous curriculum focuses on computer science, combinatorics, and number theory, and prepares students for the challenges of STEM majors and careers.
- Designed, implemented, and presented efficient algorithms for solving a series of mathematically-focused puzzles and problems using Python Strings, loops, lists, tuples, and dictionaries

Dartmouth Endowment Fellow, Hanover, NH **Aug. 2025 - Sep. 2025**

- Six-week summer program on endowment investing and portfolio construction. Topics included the endowment model, market structure, public markets (global equities, hedge funds), private markets (PE/VC/real assets), and portfolio theory, with a case study.

Leadership

Dartmouth Social Venture Incubator (Acesso StartUp), Hanover, NH **Feb. 2024 - Oct. 2025**

- Selected for Dartmouth's competitive Social Venture Incubator to build Acesso, a social-impact startup using ML to reduce hospital insurance claim denial rates.
- Led ML engineering as Head ML Engineer, programming XGBoost, random forest, linear regression, and neural network models to predict denial risk and prioritize high value claims.
- Won the SVI Grant Pitch Competition, receiving $3,000 in funding to support summer product development and early prototype testing.

Magnuson Center Startup Pitch Competition Semi-Finalist, Hanover NH **Apr. 2025 - May 2025**

- Selected as one of 9 teams from a national applicant pool to present Acesso, an ML-powered health claims assistant startup I co-founded, to a panel of venture capitalists and industry professionals
- Designed and iterated pitch decks, data visuals, and messaging through workshops with mentors and healthcare professionals