Matthew Yuan

github.com/code-by-matt
my4@princeton.edu
609-216-0038

Education

Princeton University, Princeton, NJ   September 2017–May 2021 (Expected)
– Bachelor of Arts (A.B.) in Mathematics, 3.8 GPA.
– Coursework includes Algorithms and Data Structures, Probability and Stochastic Systems, Computational Geometry, Linear Algebra, Multivariable Calculus, Combinatorics, Real Analysis, and Fourier Analysis.
University of Oxford, Oxford, UK (study abroad)   January 2020–Present
– One on-site trimester at Worcester College, one remote trimester.
– Coursework includes Artificial Intelligence (AI), Algebraic Number Theory, Topology, Philosophy of Mathematics.

Experience

Product Management Intern, Roblox, Commerce Team   May 2020–August 2020
– Worked with engineering and design to gain insights about Roblox Premium subscribers. Product owner of a cancellation survey that received over 7000 responses within a week of launch.
– Presented to legal team an analysis of how competitors discourage friendly fraud, which informed new anti-friendly fraud features being planned for all Roblox users under 13.
– Contributed to strategic planning for new ad surfaces in the upcoming Roblox Universal App.
Adversarial Machine Learning Researcher, University of Oxford   March 2020–Present
– Study and implement existing attacks against deterministic neural networks.
– Propose and test new attacks against Bayesian neural networks, which are known to be more robust.
– Meet weekly (remotely) with a research assistant and a doctoral student to discuss progress.
Course Assistant, Princeton University   September 2018–May 2019
– Led weekly problem sessions for about 50 students in Real Analysis and Linear Algebra.
– Helped students understand complex mathematical ideas and guided students through homework problems.

Activities

Writer, medium.com/@my4   November 2018–Present
– Write short stories on Medium about math, origami, and whatever else interests me in the moment.
– Articles featured by Medium on their Math and Design topic pages and published by Medium's largest active publication.
– Previously managed and wrote for a student-run publication that interviews startup founders.

Projects

Connect6 Bot   July 2020–Present
– Program a bot that plays the abstract strategy game Connect6 using a combination of Monte-Carlo tree search (MCTS) and threat-space search. Written in Python.
– Bot will interface with the online game server Little Golem to play against hundreds of human Connect6 players.
Author in Princeton Undergraduate Research Journal   Spring 2019
– Presented a creative, narrative explanation of Carl Friedrich Gauss's discovery that the regular seventeen-sided polygon is constructible using a compass and straightedge.
– Driven by curiosity and a desire to understand the real-world historical context of Gauss's work.
– 1 of 5 papers selected for publication out of 23 total submissions.

Skills

Programming Languages and Technologies
– Python, Git, LaTeX, JavaScript, HTML/CSS, Java.
Concepts
– Product Management, Object-Oriented Programming, Machine Learning, Mathematical Reasoning, Teaching.
Languages
– English, Mandarin.