Andrew Bean

+44 7515 178559 | andrew.bean@oii.ox.ac.uk | 🔗 andrew-m-bean

I am a DPhil student at the Oxford Internet Institute studying the design of sociotechnical human-AI systems, with a particular focus on complementarity and collective intelligence in human-AI teams. My research mixes technical elements in the building and training of AI agents with experimental methods in online user studies. Before my postgraduate work, I spent several years building interpretable algorithmic systems for trading financial markets at Bridgewater Associates, the largest hedge fund in the world.

EDUCATION

University of Oxford — Oxford, UK
DPhil in Social Data Science — Oct 2022 - Sept 2025

Advisors: Dr Adam Mahdi, Dr Luc Rocher

University of Oxford — Oxford, UK
MSc in Social Data Science with Distinction — Oct 2021 - Sept 2022

Thesis Grade: 73 (Distinction) / Cumulative Mark: 71 (Distinction)

MSc Thesis: *Teaching AI to Cooperate with Human Partners through Rule-based Play*

Advisors: Dr Adam Mahdi, Dr Luc Rocher

Relevant Coursework (Mark): Machine Learning (81), Data Analytics at Scale (75), Introduction to Natural Language Processing (71), Frontiers of Social Data Science (70)

Yale University — New Haven, CT
B.S. in Applied Mathematics *cum laude* — Sept 2013 - May 2017

GPA: 3.87/Major GPA: 3.94 with Distinction in Applied Mathematics

Thesis: *nullSolve: An iterative kernel-based method for solving directed Laplacian systems*

Advisor: Dr Beth Anne Bennett

HONORS AND AWARDS

Algorithmic Bias Bounty: Most Innovative Approach — 2022

Co-led a team to top-5 finishes in both categories of a global machine learning competition

Judges including Dr Rumman Chowdhury discretionally awarded a commendation for our innovative approach

Clarendon Scholar — 2022

Full tuition and stipendiary support for postgraduate study at the University of Oxford

Awarded to "the best students worldwide, as decided by experts in each student's field"

One of about 200 scholars chosen from the entire postgraduate applicant pool of more than 40,000

Thouron Scholar — 2015

Full tuition and stipendiary support for study abroad at the University of Cambridge

Awarded annually to 9 students from Harvard, Yale, and the University of Pennsylvania

U.S. Presidential Scholar Semi-Finalist — 2013

Selected by the United States Congress as one of the top 600 students in the country

RESEARCH EXPERIENCE

Independent Student Researcher — 2015
PI: Dr Andrés Villar, University of Cambridge

Ran an independent research project assessing the role of supranational organisations in creating cohesive voting patterns in the UN General Assembly

Summer Research Fellow — 2014
PI: Professor Paul Van Tassel, Yale University

Assisted in performing computational chemistry experiments supervised by a doctoral student

TEACHING EXPERIENCE

Teaching Assistant: Computational Methods for the Social Sciences — Hilary Term 2023
Instructors: Dr Luc Rocher and Dr Fabian Stephany — University of Oxford

- Planned Python curriculum and authored practical coding materials
- Provided feedback on research design for final assessments
- Held weekly office hours for troubleshooting and project advice

Teaching Assistant: Applied Analytical Statistics — Michaelmas Term 2022
Instructors: Dr Adam Mahdi — University of Oxford

- Prepared practical coding exercises to complement theoretical lecture material
- Designed and taught an additional class section on academic writing

INDUSTRY EXPERIENCE

Data Science Consultant — Mar 2021 – Oct 2021
HealthSherpa — Sacramento, CA

- Collaborated with the CEO to produce collateral for ongoing investor presentations
- Constructed machine learning models to assess opportunities for business investment
- Oversaw research design and analysis of A/B testing on consumer-facing platform changes
- Designed and launched a new 'Marketplace Pulse' platform, providing real-time data and analysis to clients
- Standardized data best-practices through templatisation and authoring of a data dictionary
- Renovated data pipelines by replacing manual data ingestion, cleaning, and matching with reusable scripts

Investment Associate — Sept 2017 – Jan 2021
Bridgewater Associates — Westport, CT

- Expanded upon global macroeconomic understanding through study of fundamental drivers across global markets and history
- Served as business product owner for a new data visualization platform under the mentorship of the senior business owner for research technology
- Drafted and prepared analytics for external publication, including representing the company voice in quarterly letters sent to clients and policymakers on behalf of the CIOs
- Architected and executed on renovation of portfolio oversight materials, including coordinating cross-functional software development and data engineering in support of the project
- Co-led an overhaul of the analytics training course for new associates, re-designing the instructional role, resulting in significantly higher impact from newly trained associates as rated by their managers
- Modelled and projected return scenarios to support risk allocation decisions for a $100bn flagship portfolio
- Developed proprietary algorithms to trade fixed income markets from quantitative understanding of market drivers

SKILLS

Fluent with Python including Pandas, PyTorch, and TensorFlow, and (Postgre)SQL
Previous experience with Matlab, C, R, and JavaScript