

NEIL NATARAJAN

HUMAN-CENTERED ARTIFICIAL INTELLIGENCE RESEARCHER

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RESEARCH INTERESTS

Human-Centered Artificial Intelligence · Explainable AI (XAI) · Algorithmic Fairness · Human-Computer Interaction (HCI) · Generative AI · AI in Recruitment & Selection · AI in Mental Health

EDUCATION

University of Oxford, Oxford UK **October 2021 – Present (Submitted and Defended)**
DPhil (PhD) in Computer Science
Study Area: Human-Centered Artificial Intelligence
Dissertation: Selection-Oriented AI: The Role of HCI in Supporting Solutions to Explainability, Diversity, and Plagiarism in Global Scholarship Selection

University of Oxford, Oxford UK **September 2017 – June 2021**
Undergraduate Masters of Computer Science and Philosophy **First Class**
Master's Thesis: Justifying Algorithmic Decisions: The influence on perceptions of justice in algorithmic decision-making
Relevant Coursework: Artificial Intelligence, Machine Learning, Advanced Topics in Machine Learning, Computational Learning Theory, Philosophical Logic, Elements of Deductive Logic, The Philosophy of Logic and Language, Philosophy of Cognitive Science

PUBLICATIONS

Published

- **Neil Natarajan**. 2024. *Detecting Generative AI Usage in Application Essays*. In *Generative AI and HCI Workshop at CHI 2024*. https://generativeaiandhci.github.io/papers/2024/genaichi2024_9.pdf
- **Neil Natarajan**. 2023. *Human-AI Collaboration in Recruitment and Selection*. In *Doctoral Consortium at IJCAI 2023*. <https://doi.org/10.24963/ijcai.2023/819>
- **Neil Natarajan**, Jun Zhao, Reuben Binns, and Nigel Shadbolt. 2022. *Trust Explanations to Do What They Say*. In *Workshop on Human-Centered AI at NeurIPS 2022*. <https://arxiv.org/abs/2303.13526v1>
- Joel T. Nigg, Alexis L. Elmore, **Neil Natarajan**, Karen H. Friderici, and Molly A. Nikolas. 2016. *Variation in an Iron Metabolism Gene Moderates the Association Between Blood Lead Levels and ADHD in Children*. *Psychological Science*, 27(2), 257–269. <https://doi.org/10.1177/0956797615618365>

In Progress and Under Review (Preprints available on request)

- **Neil Natarajan**, Sruthi Viswanathan, Xavier Roberts-Gaal, and Michelle Martel. 2025. *Position: AI Will Transform Neuropsychology Through Continuous Diagnostic Companions for Dynamic Mental Health Care*.
- Kadeem Noray and **Neil Natarajan**. 2024. *Selecting for Diverse Talent: Theory and Evidence*.
- **Neil Natarajan**, Sruthi Viswanathan, Reuben Binns, Nigel Shadbolt. 2024. *'Diversity is Having the Diversity': Unpacking and Designing for Diversity in Applicant Selection*.
- **Neil Natarajan**, Reuben Binns, Ulrik Lyngs, Nigel Shadbolt. 2024. *XAI: Misleading In Process, but Useful Post Hoc*.
- **Neil Natarajan**, Elías Hanno, Logan Gittelson, Reuben Binns, Nigel Shadbolt. 2024. *What Are Generative AI Detectors Good For? Evaluating and Implementing with the Decision Matrix*.

RESEARCH EXPERIENCE

Autoscience Institute, San Francisco, CA, USA **January 2025 – Present**
AI Research Scientist *January 2025 – April 2025*

- Worked as part of a 5-person team to build Carl, the world's first AI system to autonomously ideate, execute, and write up research that passed peer review
- Primarily focused on auditing Carl's work, which spanned parameter-efficient finetuning (LoRA), fairness and bias (dataset balancing) and mechanistic interpretability (probes)

Advisor *April 2025 – Present*

The Ellison Institute of Technology (EIT), Remote **January 2024 – December 2024**
AI Research Consultant

- Built human-centric AI systems to evaluate the best scholarship applicants
- Engaged the EIT selection team in participatory design research: *'Diversity is Having the Diversity': Unpacking and Designing for Diversity in Applicant Selection*

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Schmidt Futures, Remote
AI Research Consultant

January 2022 – August 2024

- Conducted HCI research on Schmidt Futures' Rise program to better understand the best means to build AI systems as decision-support tools
- Engaged the Rise selection team in participatory design research: *Detecting Generative AI Usage in Application Essays*, *What Are Generative AI Detectors Good For?*, *Evaluating and Implementing with the Decision Matrix*, and *Selecting for Diverse Talent: Theory and Evidence*

BigID Inc, Tel Aviv, Israel (Remote)
Machine Learning and Data Science Intern

January 2021 – September 2021

- Conducted research into Explainable Machine Learning using BigID's database and models

Oxford Economics, Oxford, UK
AI and Machine Learning Intern

April 2019 – May 2019

- Taught a course in Machine Learning to the Oxford Economics software development team
- Built Web Scraping and Natural Language Processing tools to extract data from published economic forecasting reports using Python

TEACHING EXPERIENCE

Balliol College, Oxford, UK
Stipendiary Lecturer

September 2022 – September 2023

- Taught first- and second-year computer science courses
- Gave tutorials; Oxford's tutorials are a one-on-one or one-on-two meeting between teacher and student(s), with problem sets presented in advance and used as material for discussion

WEB DEVELOPMENT EXPERIENCE

Babbel Inc, New York, NY, USA
Front End Engineering Intern

July 2019 – September 2019

- Maintained the Babbel Magazine codebase, which supports Babbel's main web-based marketing, using ReactJS, HTML, and CSS

AWARDS

Doctoral Consortium Fellowship, IJCAI

2023

Selected participant in the highly competitive doctoral consortium.

Proxime Accessit to Gibbs Prize in First Higher Examination, University of Oxford

2020

Awarded to second-ranked student in second- and third-year cohort.

Gibbs Prize in Preliminary Examinations, University of Oxford

2018

Awarded to top-ranked student in first-year cohort.