# Tim Hua

Neel Nanda's MATS Mentee. Formerly on John List's economics team at Walmart

Website: <u>timhua.me</u>
EDUCATION & SKILLS

Middlebury College

Middlebury, VT

BA, summa cum laude, Economics (GPA 3.97/4.00)

May 2023

D.K. Smith Economics Prize for best thesis (*Fox News's Effect on Social and Moral Preferences*).

• Thesis cited by Harvard economist Benjamin Enke in Moral Boundaries

**Harvard College** 

Cambridge, MA

Visiting Undergraduate Student (GPA: 4.0/4.0)

2021 - 2022 School Year

• Coursework: Intermediate Microeconomics: Advanced, Great Theorems of Microeconomic Theory, Probability, Statistics. Taken at MIT: Real Analysis, Political Economy

General skills: Pytorch/Python, R, SQL, Stata.

#### AI SAFETY

#### Neel Nanda and Sam Marks's MATS Scholar

Berkeley, CA

Scholar

Apr 2025 – Current

- Working on alignment auditing techniques in Neel Nanda's MATS stream with <u>Andrew Qin</u>. Sam Marks is co-advising our project.
- Training model organisms that act differently in evaluation v. deployment and eliciting the deployment behavior on obviously evaluation contexts through steering.
- Earlier work studied uncovering "semantic backdoors" in models.

## Tyler Tracy's MARS Mentee in AI Control

Berkeley, CA

Researcher

Jan 2025 – June 2025

- Developed theory and ran experiments on optimally combining costly runtime monitors.
- See our alignment forum post here for results.

# Alice Rigg's AI Safety Camp Mentee in Mechanistic Interpretability

Remote

Kesearcher

Jan 2025 – June 2025

- Studied the functional role of SAE error terms. See alignment forum post  $\underline{\text{here}}.$ 

#### Miscellaneous

- BlueDot Economics of Transformative AI Course Facilitator (Feb 2025 Cohort)
- Wrote a critique of the bias in bios experiment in Sparse Feature Circuits on alignment forum.

#### **PROFESSIONAL EXPERIENCES**

#### **Walmart Economics Team**

New York, NY

*Manager, Economist* Intern in summer 2022, full time July 2023 – Aug 2024 Worked on monetary incentives for drivers on Walmart's last mile delivery platform.

- Designed and executed numerous experiments, some with multiple treatment arms.
- Built ML models using causal random forests and other double ML methods, ran hyperparameter sweeps with out-of-sample off-policy validation following <u>Treatment Allocation Under Uncertain Costs</u>
- Wrote R code that conducts synthetic difference in differences estimation and calculates conformal inference-based confidence in parallel. Code reused by others on my team.
- Presented work to Walmart chief economist John List, fifth ranked economist in the world
- Translated technical findings and frameworks for non-technical partner business teams As an intern, created pricing zones that minimized customers' cross-zone shopping by constructing a weighted graph of Walmart stores and partitioning the graph.
- Pricing zones are still used at Walmart today

### **Harvard Economics Department**

Remote

Course Assistant for Professor Edward Glaeser

June 2022 – Dec 2022

• Wrote sections in the textbook of Econ 1011a: Intermedia Microeconomics: Advanced.

### Harvard Kennedy School

Cambridge, MA

Research Assistant for Professor Desmond Ang

March 2022 – July 2022

• Scraped tytropes.org for an exploratory project investigating stereotypes in films.

## **Brookings Institution**

Remote

Research Assistant for Professor Carol Graham

June 2021 – May 2022

• Coauthor on <u>paper</u> examining mental and physical ill-being during the COVID-19 pandemic.

## Middlebury Economics Department Research Assistant for Professor Marin Abel

Middlebury, VT September 2020 - March 2021

• Investigate how different compensation schemes could help close the behavior-intention gap.