

# Arvind Raghavan

[website](#) | (646) 785 6520 | [arvind.raghavan@columbia.edu](mailto:arvind.raghavan@columbia.edu)

---

## EDUCATION

### **M.Sc, Computer Science (Machine Learning), Dec 2022**

- Columbia University, City of New York
- Expected GPA: 4.13/4.0 (top-of-class in 4 of 10 courses)
- Subjects: Bandits & RL, Computational Learning Theory, Advanced Causal Inference, Applied Causality, Geometric Data Analysis, Deep Learning, Analysis of Algorithms
- Teaching Assistant: Causal Inference, Advanced Deep Learning, Fair & Robust Algorithms

### **B. Eng (Honours), Information Engineering & Media, 2013**

- Nanyang Technological University, Singapore
- GPA: 4.3/5 (high 2:1)
- Concentrations: Computer Science, Human-Centric Design, Linguistics

## PUBLICATIONS [[url](#)]

**Arvind Raghavan**. “Avoiding Calvinist Decision Traps Using Structural Causal Models”. In *NeurIPS - Workshop on ML Safety, 2022*

**Arvind Raghavan**, Elias Bareinboim. “Optimal and Stable Decision Strategies in Multi-Agent Problems with Generalized Multi-Arm Bandits”. *Working Paper*

**Arvind Raghavan**. “CausalEXP3 – An Efficient Causal Algorithm for Adversarial Bandits”. *Working Paper*

**Arvind Raghavan**, ..., Kate Saenko, Armando Solar-Lezama, Iddo Drori. “Text to graphics by program synthesis with error correction on precise, procedural, and simulation tasks”. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2023* (under review)

Vitali Petsiuk, ..., **Arvind Raghavan**, ..., Iddo Drori. “Human Evaluation of Text-to-Image Models on a Multi-Task Benchmark”. In *NeurIPS - Workshop on Human Evaluation of Generative Models, 2022* - **Oral Presentation**

Iddo Drori, ..., **Arvind Raghavan**, .... “A Dataset for Learning University STEM Courses at Scale and Generating Questions at a Human Level”. In *AAAI Symposium on Educational Advances in Artificial Intelligence, 2023* (under review)

## **RESEARCH EXPERIENCE**

**Research Assistant | Causal AI Lab, Columbia University** **Summer 2022**

- Conducted independent research in decision theory, reinforcement learning and causal inference, supervised by Prof. Elias Bareinboim.
- Proposed a novel framework generalizing Bandit problems to represent multi-agent interactions, proving the optimality of some decision-making criteria over others, and currently working to establish the physical limits of counterfactual experimentation.

## **RECENT INDUSTRY EXPERIENCE**

**B2B Finance Manager | Citibank UK** **2019 - 2021**

- Structured trade financing solutions for European multinational corporations
- Led data analytics team in Europe, using proprietary Python and SQL libraries on client datasets to identify working capital opportunities and build dynamic pricing models

**Big Data Marketing Lead | Citibank Singapore** **2017 - 2019**

- Project-managed launch of a recommender system for consumer products, using a collaborative filtering approach with preferences extracted from customer transactions
- Co-led the complex project through design, regulatory approval and monetization phases
- Received Singapore Business Manager Award for role in increasing customer engagement 3x and delivering customer spend increase of 4 – 15% in pilot campaigns

**eCommerce Business Development Manager | Citibank Singapore** **2017 - 2019**

- Built partnerships with eCommerce giants to grow the bank's API-connectivity and co-brand ventures with the likes of the Alibaba group, Airbnb, Amazon, Expedia, Uber etc.
- Grew Citibank Singapore's eCommerce revenue by 27% year-on-year (target 20%), consistently outperforming rest-of-industry

## **AWARDS & GRANTS**

**Open Philanthropy grant** (2022) for promising early-career researchers in AI alignment

**Singapore Country Business Manager Award** (2018) for Recommender System project

## **LEADERSHIP**

**Board Member, Effective Altruism Singapore**

- Redirected over S\$70Mn to more impactful interventions through philanthropic consultancy

**Signatory, Giving What We Can Pledge**

- Publicly committed to donating at least 10% of income until retirement

## **Former Secretary, Singapore Interbank LGBTQ+ Forum**

- Founded the network for supporting nearly 100,000 members with policy proposals

## **SKILLS & HOBBIES**

- **Programming:** Python packages for DL and Probabilistic ML (Pytorch, TF, Pyro); Big Data platforms (Hadoop, Spark); Large Language Models (Hugging Face suite)
- **Languages:** Fluent in Tamil, Hindi, Telugu; intermediate proficiency in Mandarin Chinese and French (spoken and written)
- **Translation** of classical poetry from Tamil, Sanskrit, Pali and Classical Chinese
- **Reading:** Sci-Fi, History of Ideas, non-Western philosophy [[Goodreads](#)]
- **Silent Meditation Retreats:** deeply interested in understanding cognitive science and the mind-body problem from the first-person POV; attend 11-day annual retreats in total silence

Last updated - Nov 2022