Naveen Raman
https://naveenraman.com

Phone: 240-778-5410, Email: naveenr@cmu.edu

EDUCATION

Carnegie Mellon University   Pittsburgh, PA
PhD Machine Learning   August 2023 -
Advisor: Fei Fang

University of Cambridge   Cambridge, England
MPhil Advanced Computer Science   October 2022 - June 2023
Graduated with Distinction

University of Maryland   College Park, MD
Bachelor of Science - Computer Science and Math, High Honors   August 2018 - May 2022
GPA: 3.97, Magna Cum Laude

PUBLICATIONS

Full Papers

Do Concept Bottleneck Models Obey Locality?
TMLR 2025
Naveen Raman, Mateo Espinosa, Juyeon Heo, Mateja Jamnik

Data-driven Design of Randomized Control Trials with Guaranteed Treatment Effects
ICML 2025
Santiago Cortes-Gomez, **Naveen Raman**, Aarti Singh, Bryan Wilder

Assortment Optimization for Matching Patients and Providers
ML4H Findings 2024
Naveen Raman, Holly Wiberg

Global Rewards in Restless Multi-Armed Bandits
NeurIPs 2024
Naveen Raman, Ryan Shi, Fei Fang

Understanding Inter-Concept Relationships in Concept-Based Models
ICML 2024
Naveen Raman, Mateo Espinosa Zarlenga, Mateja Jamnik

Human Uncertainty in Concept-Based AI Systems
AIES 2023
Katherine M Collins, Matthew Barker, Mateo Espinosa Zarlenga, **Naveen Raman**, Umang Bhatt,
Mateja Jamnik, Ilia Sucholutsky, Adrian Weller, Krishnamurthy Dvijotham

Data-Driven Methods for Balancing Fairness and Efficiency in Ride-Pooling
IJCAI 2021
Naveen Raman, Sanket Shah, John Dickerson

**Stress and burnout in open source: Toward finding, understanding, and mitigating
unhealthy interactions**
ICSE NIER 2020
Naveen Raman, Minxuan Cao, Yulia Tsvetkov, Christian Kästner, Bogdan Vasilescu

A Muffin-Theorem Generator
FUN 2018
Guangqi Cui*, John Dickerson*, Naveen Durvasula*, William Gasarch*, Erik Metz*, Jacob Prinz*,
Naveen Raman*, Daniel Smolyak*, Sung Hyun Yoo*

Workshop Papers

Improving Learning-to-Defer Algorithms Through Fine-Tuning
Workshop on Human and Machine Decisions (WHMD) at NeurIPS 2021
Naveen Raman, Michael Yee

Eliciting Bias in Question Answering Models through Ambiguity
Machine Reading for Question Answering (MRQA) at EMNLP 2021
Andrew Mao*, **Naveen Raman***, Matthew Shu, Eric Li, Franklin Yang, Jordan Boyd-Graber

What more can Entity Linking do for Question Answering?
Human And Machine in-the-Loop Evaluation and Learning Strategies (HAMLETS) at NeurIPS 2020
Naveen Raman, Pedro Rodriguez, Jordan Boyd-Graber

Under Review

PeerCoPilot: A Language Model-Powered Assistant for Behavioral Health Organizations
Gao Mo*, **Naveen Raman***, Megan Chai, Cindy Peng, Shannon Pagdon, Nev Jones, Hong Shen, Peggy Swarbrick, and Fei Fang

Large Language Models in Peer-Run Community Behavioral Health Services: Understanding Peer Specialists and Service Users' Perspectives on Opportunities, Risks, and Mitigation Strategies
Megan Chai*, Cindy Peng*, Gao Mo, **Naveen Raman**, Shannon Pagdon, Fei Fang, Nev Jones, Peggy Swarbrick, and Hong Shen

Contextual Budget Allocation for Food Rescue Volunteer Engagement
Ariana Tang, **Naveen Raman**, Fei Fang, and Ryan Shi

An Extended Study on Restless Multi-Armed Bandits with Global Rewards
Naveen Raman, Ryan Shi, Sean Hudson, Ameesh Kapoor, and Fei Fang

PROFESSIONAL SERVICE

Conference Reviewing

Main Conference: NeurIPS (2022,2023, Top Reviewer 2024, 2025), AAAI (2025), ICML (2024,2025), AAMAS (2024), COLING (2022), AISTATS (2025), EAAMO (2025), CHIL (2025)
Workshop: ICML Actionable Interpretability (2025)

Organizing

MLC Nigeria *Volunter Assistant*	October 2023 - Present
Machine Learning for Health *Roundtable Chair*	December 2024

Department Service

Machine Learning Department *Masters Admissions Committee*	November 2024 - May 2025
Machine Learning Blog *Blog Editor*	August 2024 - Present
Machine Learning Department *Social Committee*	October 2023 - May 2024

Mentorship

School of Computer Science *Graduate Application Support Program*	October 2023 - Present
School of Computer Science *Tech Nights*	October 2023 - December 2023
School of Computer Science *AI Mentorship Program*	October 2023 - December 2023
Student Community Action *Big Sibling*	October 2022- May 2023
Maryland Mentors Program *Math and Reading Tutor*	September 2020-May 2022
College Park Academy *Academic Volunteer*	September 2018-May 2021
College Mentors for Kids *Mentor*	January 2021 - May 2021

TALKS

Assortment Optimization for Patient-Provider Matching
Marketplace Innovations Workshop
Stanford (Madeleine Udell's Group)

PeerCoPilot: A Language-Model Assistant for Behavioral Health Organizations
Carnegie Mellon FEAT Reading Group
AI for Social Impact

Global Rewards in Restless Multi-Armed Bandits
Food Rescue Conference
University of Maryland Multi-Agent RL Group
Carnegie Mellon Econ-CS Reading Group
Multi-Agent Learning Seminar
EAAMO Urban Data Science Working Group

Inter-Concept Learning Relationships
Gordon Conference on Cancer Genetics

Experience

Amazon	Palo Alto, CA
Research Intern	Summer 2025
World Resource Institute	Washington DC
Research Intern	Spring 2022
MIT Lincoln Labs	Lexington, MA
Research Intern	Summer 2021
Facebook	Menlo Park, CA
Software Engineering Intern	Summer 2020
REUSE @ Carnegie Mellon	Pittsburgh, PA
Research Intern	Summer 2019

Honors and Awards

NeurIPS Top Reviewer	2024
ICML Travel Grant (declined)	2024
University of Maryland Undergraduate Researcher of the Year	2022
National Science Foundation Graduate Reserach Fellowship (GFRP)	2022
Churchill Scholarship (fully funded Cambridge MPhil)	2022
CRA Undergraduate Researcher of the Year Finalist	2021
Phillip Merrill Presidential Scholar	2021
Barry Goldwater Scholarship	2021
Brendan Iribe Scholarship (full tuition scholarship)	2020
President's Scholarship (4-year scholarship)	2018

Teaching

Teaching Assistant: Programming Languages, University of Maryland
Taught Ruby, Rust, and Functional Programming to UMD undergraduates (Fall 2019-Spring 2022)

Head Course Facilitator: Algorithms for Interviews, University of Maryland
Developed and taught student-run class on algorithms for coding interviews (Spring 2020-Spring 2022)

Teaching Assistant: Web Development, University of Maryland
Taught HTML and Javascript to non-CS major students at UMD (Spring 2019)