Arjun Subramonian (they/them) Email: arjunsub@cs.ucla.edu

Computer Science Department Website: arjunsubramonian.github.io

University of California, Los Angeles

Core Organizer, Queer in AI

Publications: Semantic Scholar, Google Scholar

GitHub: github.com/ArjunSubramonian

## Research Interests

graph machine learning, natural language processing, fairness, justice, ethics

## Education

PHD in Computer Science; University of California, Los Angeles (2021-Present), GPA: 3.940 Amazon Science Hub Fellow, NSF MENTOR Fellow, Eugene V. Cota-Robles Fellow *Advisors:* Yizhou Sun, Kai-Wei Chang

BS in Computer Science; University of California, Los Angeles (2018-2021), GPA: 3.927 Summa Cum Laude

# Work Experience

Research Intern; FAIR Cost and Alignment (2024)

Research Intern; FAIR Society and Responsible AI (2022)

Research Intern; Microsoft Research FATE (2022)

Privacy Research Intern; Snap, Inc. (2021)

AllenNLP Research Engineering Intern; Allen Institute for Artificial Intelligence (2021)

Software Engineering Intern; Microsoft Corporation (2020)

Software Engineering Intern; Get Heal, Inc. (2019)

# Conference Papers, Journal Papers, and Book Chapters

Theoretical and Empirical Insights into the Origins of Degree Bias in Graph Neural Networks, arXiv Arjun Subramonian, Jian Kang, Yizhou Sun

NeurIPS 2024 (25.8% acceptance rate)

Understanding "Democratization" in NLP Research, *URL*Arjun Subramonian\*, Vagrant Gautam\*, Dietrich Klakow, Zeerak Talat

**EMNLP 2024** 

Networked Inequality: Preferential Attachment Bias in Graph Neural Network Link Prediction, *URL* Arjun Subramonian, Levent Sagun, Yizhou Sun

ICML 2024 (27.5% acceptance rate)

Graph Learning Frontiers @ NeurIPS 2023 Oral (15.4% acceptance rate)

Evaluating the Social Impact of Generative AI Systems in Systems and Society, arXiv

Irene Solaiman\*, Zeerak Talat\*, ..., Arjun Subramonian

Oxford University Press Handbook on Generative AI

Motif-Driven Contrastive Learning of Graph Representations, URL

Shichang Zhang, Ziniu Hu, Arjun Subramonian, Yizhou Sun

Transactions on Knowledge and Data Engineering

Factoring the Matrix of Domination: A Critical Review and Reimagination of Intersectionality in AI Fairness, *URL* Anaelia Ovalle, **Arjun Subramonian**, Vagrant Gautam, Gilbert Gee, Kai-Wei Chang AIES 2023 Oral (7.7% acceptance rate)

Bound by the Bounty: Collaboratively Shaping Evaluation Frameworks for Queer AI Harms, *URL* Organizers Of QueerInAI, ..., **Arjun Subramonian**, ..., Jess de Jesus de Pinho Pinhal AIES 2023 (28.9% acceptance rate)

It Takes Two to Tango: Navigating Conceptualizations of NLP Tasks and Measurements of Performance, *URL* Arjun Subramonian, Xingdi Yuan, Hal Daumé III, Su Lin Blodgett Findings of ACL 2023 (41.89% acceptance rate)

[Best Paper] Queer In AI: A Case Study in Community-Led Participatory AI, *URL* Organizers of QueerInAI, ..., Arjun Subramonian, ..., Luke Stark FAccT 2023 (24.5% acceptance rate)

On the Discrimination Risk of Mean Aggregation Feature Imputation in Graphs, *URL* Arjun Subramonian, Kai-Wei Chang, Yizhou Sun NeurIPS 2022 (25.6% acceptance rate)

Queer in AI, URL

Organizers of QueerInAI, ..., **Arjun Subramonian\***, ..., Jeffrey Xiong\* XRDS: Crossroads, The ACM Magazine for Students, Volume 28, Issue 4

On Dyadic Fairness: Exploring and Mitigating Bias in Graph Connections, *URL*Arjun Subramonian

ICLR 2022 Blogpost Track (32% acceptance rate)

Harms of Gender Exclusivity and Challenges in Non-Binary Representation in Language Technologies, *URL* Sunipa Dev, Masoud Monajatipoor\*, Anaelia Ovalle\*, **Arjun Subramonian**\*, Jeff M Phillips, Kai-Wei Chang EMNLP 2021 Oral (9.8% acceptance rate)

Women in Machine Learning @ NeurIPS 2021

MOTIF-Driven Contrastive Learning of Graph Representations,  $\mathit{URL}$  Arjun Subramonian

AAAI 2021 Undergraduate Consortium (17% acceptance rate)

Automated, Cost-Effective Optical System for Accelerated Antimicrobial Susceptibility Testing (AST) Using Deep Learning, *URL* Calvin Brown, ..., Arjun Subramonian, ..., Aydogan Ozcan ACS Photonics

Estimating the Ages of FGK Dwarf Stars Through the Use of GALEX FUV Magnitudes, *URL* Sara Crandall, Graeme H. Smith, **Arjun Subramonian**, Kelly Ho, Evelyn M. Cochrane The Astronomical Journal

# **Workshop Papers**

Stop! In the Name of Flaws:

Disentangling Personal Names and Sociodemographic Attributes in NLP, URL

Vagrant Gautam, Arjun Subramonian, Anne Lauscher, Os Keyes

Gender Bias in NLP @ ACL 2024

Prompting Multilingual Large Language Models to Generate Code-Mixed Texts:

The Case of South East Asian Languages, URL

Zheng-Xin Yong, ..., Arjun Subramonian, ..., Alham Fikri Aji

Computational Approaches to Linguistic Code-Switching @ EMNLP 2023

Critical Technopolicy and Reflexivity For Proactive Gender-Inclusive NLP

Davi Liang, Anaelia Ovalle, Arjun Subramonian, Alicia Boyd

Queer in AI @ ACL 2023

Group Excess Risk Bound of Overparameterized Linear Regression with Constant-Stepsize SGD, URL

Arjun Subramonian, Levent Sagun, Kai-Wei Chang, Yizhou Sun

Trustworthy and Socially Responsible Machine Learning @ NeurIPS 2022

You Reap What You Sow: On the Challenges of Bias Evaluation Under Multilingual Settings, URL

Zeerak Talat, ..., **Arjun Subramonian\***, ..., Oskar van der Wal\*

Challenges & Perspectives in Creating Large Language Models @ ACL 2022

How to Make Virtual Conferences Queer-Friendly: A Guide, URL

Organizers of QueerInAI, ..., Arjun Subramonian, ..., Nyx McLean

Widening NLP @ EMNLP 2021

Motif-Driven Contrastive Learning of Graph Representations, arXiv

Shichang Zhang, Ziniu Hu, Arjun Subramonian, Yizhou Sun

Self-Supervised Learning @ WWW 2021

Queer | Inclusive | Badass, URL

Arjun Subramonian

Resistance AI @ NeurIPS 2020

## **Preprints**

An Effective Theory of Bias Amplification, in submission, arXiv

Arjun Subramonian, Samuel Bell, Levent Sagun, Elvis Dohmatob

Strong Model Collapse, in submission, arXiv

Elvis Dohmatob, Yunzhen Feng, Arjun Subramonian, Julia Kempe

Survey of Bias In Text-to-Image Generation: Definition, Evaluation, and Mitigation, in submission, arXiv

Yixin Wan, **Arjun Subramonian**, ..., Kai-Wei Chang

Weisfeiler and Leman Go Measurement Modeling: Probing the Validity of the WL Test, arXiv

Arjun Subramonian, Adina Williams, Maximilian Nickel, Yizhou Sun, Levent Sagun

BLOOM: A 176B-Parameter Open-Access Multilingual Language Model, in submission, arXiv Teven Le Scao, ..., Arjun Subramonian, ..., Thomas Wolf

Fairness and Bias Mitigation: A practical guide into the AllenNLP Fairness module, URL Arjun Subramonian

# Public Scholarship

AI and Queer Communities, *URL* Arjun Subramonian

FINDINGS: Exploring the Impact of AI, *URL* 

National AI Advisory Committee, ..., Arjun Subramonian, ...

Queer in AI National AI Advisory Committee 2023 Briefing, *URL* Organizers of QueerInAI, Arjun Subramonian

Rebuilding Trust: Queer in AI Approach to Artificial Intelligence Risk Management, *URL* Organizers of QueerInAI, Ashwin S\*, William Agnew\*, Hetvi Jethwani\*, **Arjun Subramonian**\*

## **Invited Talks**

2024 - From "Democratization" to Personal Names: Reimagining NLP Practices Towards Justice, Algorithmic Decision Systems (ADS) Reading Group, UC Berkeley; *Slides* 

2024 - Queer In AI: A Case Study in Community-Led Participatory AI, Microsoft GLEAM Security; Slides

2024 - From "Democratization" to Personal Names: Reimagining NLP Practices Towards Justice,

UC Berkeley Data Science for Social Justice Workshop; Slides

2024 - 'Queer-Inclusive' AI: Contesting the Power Structures and Logics of Machine Learning,

IBM Research Tech for Justice Seminar; Slides

2024 - Queer In AI: A Case Study in Community-Led Participatory AI, Data & Society; Slides

2023 - Bias, Discrimination, and Power: Graphs and Natural Language, KUNGFU.AI; Slides

2023 - Bias and Power in NLP, USC ISI Natural Language Seminar; Event, Slides, Video

2022 - Bias and Power in NLP (for future consultants), Paris; Slides

2022 - Bias and Power in NLP, NLP Seminars at Dublin College University; Slides

2022 - Guest Lecture: Bias in Natural Language Processing, COM SCI 263: NLP, UCLA; Slides, Video

2022 - Queer in AI: Making AI Queer-Inclusive and Prioritizing Grassroots D&I Activism,

Humlab, Umeå University; *Slides*, *Video* 

2022 - Prioritizing Grassroots D&I Activism: Queer in AI,

AAAI Workshop on Diversity in Artificial Intelligence; *Event*, *Slides* 

2022 - Prioritizing Grassroots D&I Activism: Queer in AI, Nike Sport+AI Conference; *Event*, *Slides* 

2021 - How Can I Make My Hackathon Queer-Inclusive?, Hackcon IX; Slides, Video

2019 - An Automated and Cost-Effective System for Early Antimicrobial Susceptibility Testing

Using Optical Fibers and Deep Learning, UCLA HHMI Day; Slides

## **Invited Panels**

2024 - QICSE Panel, UC Berkeley

ICML Queer in AI Workshop; *Event* 

2024 - Challenges and Perspectives for queer and/or disabled communites presented by AI in HCI,

ICML Queer in AI Workshop; *Event* 

2024 - Artificial Intelligence and Democratic Values Roundtable, Center for AI & Digital Policy; *Event* 

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2024 - UCLA Computer Science PhD Visit Day Panel
2024 - UCLA ACM AI Outreach GALA Panel
2024 - Queer Computation: A Critical Unmaking, Coding Inquiry, McMaster
2024 - AI in the Time of Generative Models: Ensuring that Diverse Voices Are Heard,
AAAI Workshop on Diversity in AI; Event
2023 - Students with Disabilities Panel, UCLA
2023 - US AI Policy: Next Steps
2023 - Queer in AI National AI Advisory Committee Briefing; Event, Briefing, Video, Press, Findings
2023 - Partnership on AI Inclusive Data Collection Workshop
2023 - Data & Society Salon Series on Responsible AI in Government
2022 - Students with Disabilities Panel, UCLA
2022 - Accessibility and Inclusion Panel, Neuromatch Academy; Video
2022 - Gender as a Variable in NLP, NAACL Queer in AI Workshop; Event, Video
2022 - NYU Center for Responsible AI Roundtable on Accessible AI Education
2022 - Co-Opting AI: Queer, NYU's Institute for Public Knowledge; Event, Video
2022 - How Do We Improve DEI in AI?, Nike Sport+AI Conference
2021 - Eye on A.I.: Equity & Inclusion in A.I. Technology, Toronto Public Library; Video
2021 - Intersectionality Panel, NAACL; Video
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# Honors

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2024 - Amazon Science Hub Fellowship; Site
2024 - Google PhD Fellowship Nominee, 1 of 4 students selected by UCLA
2024 - JP Morgan PhD Fellowship Nominee, 1 of 2 students selected by UCLA
2023 - LoG Conference Top-10 Reviewer
2023 - Queer in AI Ford Foundation Research Grant; Site
2023 - FAccT Best Paper Award; Site
2022 - NSF MENTOR Fellowship
2021 - Allen AI Outstanding Intern of the Year; Site
2021 - Major League Hacking Top 50; Site
2021 - UCLA Samueli School-Wide Outstanding Bachelor of Science; Site
2021 - UCLA Chancellor's Service Award; Site
2021 - UCLA Samueli Engineering Achievement Award in Student Welfare; Site
2021 - UCLA Eugene V. Cota-Robles Fellowship
2021 - Boeing Company Scholarship
2021 - Brian J. Lewis Endowment
2018-2021 - UCLA Dean's Honors List
2020 - Computing Research Association Outstanding Undergraduate Researcher Honorable Mention; Site
2020 - IBM Quantum Challenge
2019 - 3rd Place Award for Best Hack @ Rose Hack, Major League Hacking
2017 - Siemens Competition Regional Finalist; Site
2016 - Award of Achievement, Association for Computing Machinery, San Francisco Bay Area Professional Chapter
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#### Service

## • Reviewing:

#### - Conferences:

- \* NeurIPS (2024, D&B 2024, Ethics 2024, 2023, D&B 2023, Ethics 2023)
- \* ICLR (2025, Workshops 2025)
- \* FAccT (2024, 2023, 2022)

- \* LoG (2024, 2023, 2022)
- \* KDD (2024, 2023)
- \* ACL (Ethics 2024)
- \* WebConf (2024)

## – Workshops:

- \* NeurIPS (GLFrontiers 2023, GLFrontiers 2022, TSRML 2022)
- \* NAACL (TrustNLP 2022, WOAH 2022, SRW 2022)
- \* ACL (TrustNLP 2023, WOAH 2023, Queer in AI 2023, BigScience 2022)

## • Conference organization:

- LoG Outreach Chair (2025)
- FAccT Socials Chair (2024, 2025)
- NeurIPS Affinity Workshops Chair (2022, 2023)
- KDD EDI Day Chair (2023)
- NAACL Accessibility Chair (2022)

# • Workshop and social organization:

- Evaluating Evaluations: Examining Best Practices for Measuring Broader Impacts of Generative AI @ NeurIPS 2024
- In Código of Hope: Possibilities of Global Solidarity and Activism in Academic Environments @ FAccT 2024
- Global AI Cultures @ ICLR 2024
- Collaboratively Developing Evaluation Frameworks for Queer AI Harms @ FAccT 2022
- Queer in AI: ICML (2024, 2022, 2021); NeurIPS (2021); ICLR (2024); AAAI (2021); NAACL (2022); ACL (2023)

## • Policy:

- Queer in AI Policy Working Group
- NIST AI Safety Institute Consortium

## • Equity, Diversity, & Inclusion (EDI):

- Queer in AI core organizer
- UCLA Samueli Standing Committee on Diversity member
- AllenNLP Hacks organizer
- QWER Hacks organizer
- ACM AI at UCLA organizer

## • Teaching:

- UCLA: Computer Science 32 (2023), Computer Science Summer Institute (2022, 2023)

# Mentoring

I am fortunate to mentor brilliant students:

- Margaret Capetz
- Naisha Agarwal
- Pranav Subbaraman

# References

Yizhou Sun (yzsun@cs.ucla.edu) Kai-Wei Chang (kwchang@cs.ucla.edu) Elvis Dohmatob (e.dohmatob@meta.com) Levent Sagun (leventsagun@meta.com)