Arjun Subramonian (they/them)

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

Email: arjunsub@cs.ucla.edu

#### Research Interests

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

#### Education

PHD in Computer Science; University of California, Los Angeles (2021-Present), GPA: 3.933

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; Meta Society and Responsible AI (2024)

Research Intern; Meta 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 and Journal Papers

Networked Inequality: Preferential Attachment Bias in Graph Neural Network Link Prediction

Arjun Subramonian, Levent Sagun, Yizhou Sun

ICML 2024 (27.5% acceptance rate)

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 (28.9% acceptance rate) 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), WiML Un-Workshop @ NeurIPS 2021

# MOTIF-Driven Contrastive Learning of Graph Representations, URL

Arjun Subramonian

Undergraduate Consortium @ AAAI 2021 (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 Astronomical Journal

# Workshop Papers

#### Networked Inequality: Preferential Attachment Bias in Graph Neural Network Link Prediction, URL

Arjun Subramonian, Levent Sagun, Yizhou Sun

GLFrontiers @ NeurIPS 2023 Oral (15.4% acceptance rate)

## 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

CALCS @ 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 TSRML @ 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 Workshop @ NeurIPS 2020

# **Preprints**

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

Survey of Bias In Text-to-Image Generation: Definition, Evaluation, and Mitigation, 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, arXiv Teven Le Scao, ..., Arjun Subramonian, ..., Thomas Wolf

Selecting Core Subgraphs for Efficient Graph Neural Network Training, URL Arjun Subramonian\*, Harsh Chobisa\*

Twitter Saliency Algorithm: Identifying Unintentional Harms to Gender Non-Conforming Individuals, *URL* Arjun Subramonian\*, Michael McKenna\*

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

### **Invited Talks**

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

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

### **Honors**

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2023 - LoG Conference Top-10 Reviewer
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2023 - FAccT Best Paper Award; Site

2022 - NSF MENTOR Fellowship

2021 - AI2 Outstanding Intern of the Year; Site

2021 - MLH 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

## Service

#### • Reviewing:

- Conferences:
  - \* NeurIPS (NeurIPS 2023, D&B 2023, Ethics 2023)
  - \* FAccT (2024, 2023, 2022)
  - \* LoG (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 organization:
  - 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:
  - NIST AI Safety Institute Consortium
  - FINDINGS: Exploring the Impact of AI
- Equity, Diversity, & Inclusion (EDI):
  - Queer in AI core organizer

- Guides on Publication Accessibility, Quality, and Inclusivity and Poster and Talk Accessibility, Quality, and Inclusivity
- UCLA Samueli Standing Committee on Diversity member
- AllenNLP Hacks organizer
- QWER Hacks co-founder, organizer, panelist, and judge
- ACM at UCLA EDI director
- ACM AI at UCLA outreach director
- "You Belong in AI!" podcast creator and producer

## • Teaching:

- UCLA: Computer Science 32 (2023), Computer Science Summer Institute (2022, 2023)
   North Hollywood High School: Intro to Machine Learning
- EDI: Guide on Gender and Pronouns for Instructors

# Mentoring

I am fortunate to mentor brilliant students:

- Margaret Capetz
- Naisha Agarwal

## References

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