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

Computer Science Department Website: arjunsubramonian.github.io

University of California, Los Angeles Publications: Semantic Scholar, Google Scholar Core Organizer, Queer in AI 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: 3.933 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 (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

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, Nathan Dennler, Anaelia Ovalle, Ashwin Singh, Luca Soldaini, **Arjun Subramonian**, Huy Tu, William Agnew, Avijit Ghosh, Kyra Yee, Irene Font Peradejordi, Zeerak Talat, Mayra Russo, 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, Anaelia Ovalle, **Arjun Subramonian**, Ashwin Singh, Claas Voelcker, Danica J. Sutherland, Davide Locatelli, Eva Breznik, Filip Klubička, Hang Yuan, Hetvi J, Huan Zhang, Jaidev Shriram, Kruno Lehman, Luca Soldaini, Maarten Sap, Marc Peter Deisenroth, Maria Leonor Pacheco, Maria Ryskina, Martin Mundt, Melvin Selim Atay, Milind Agarwal, Nyx McLean, Pan Xu, A Pranav, Raj Korpan, Ruchira Ray, Sarah Mathew, Sarthak Arora, St John, Tanvi Anand, Vishakha Agrawal, William Agnew, Yanan Long, Zijie J. Wang, Zeerak Talat, Avijit Ghosh, Nathaniel Dennler, Michael Noseworthy, Sharvani Jha, Emi Baylor, Aditya Joshi, Natalia Y. Bilenko, Andrew McNamara, Raphael Gontijo-Lopes, Alex Markham, Evyn Dŏng, Jackie Kay, Manu Saraswat, Nikhil Vytla, Luke Stark

FAccT 2023 (24.5% acceptance rate)

# On the Discrimination Risk of Mean Aggregation Feature Imputation in Graphs, $\mathit{URL}$

Arjun Subramonian, Kai-Wei Chang, Yizhou Sun

NeurIPS 2022 (25.6% acceptance rate)

#### Queer in AI, URL

Organizers of QueerInAI, Hetvi Jethwani\*, Arjun Subramonian\*, William Agnew\*, MaryLena Bleile\*, Sarthak Arora\*, Maria Ryskina\*, 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, Derek Tseng, Paige M. K. Larkin, Susan Realegeno, Leanne Mortimer, Arjun Subramonian, Dino Di Carlo, Omai B. Garner, 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

## 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, $\mathit{URL}$

Zeerak Talat, Aurélie Névéol, Stella Biderman\*, Miruna Clinciu\*, Manan Dey\*, Shayne Longpre\*, Alexandra Sasha Luccioni\*, Maraim Masoud\*, Margaret Mitchell\*, Dragomir Radev\*, Shanya Sharma\*, Arjun Subramonian\*, Jaesung Tae\*, Samson Tan\*, Deepak Tunuguntla\*, 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, A Pranav, MaryLena Bleile, Arjun Subramonian, Luca Soldaini, Danica Sutherland, Sabine Weber, Pan Xu,

William Agnew, Michael McKenna, 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**

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

Prompting Multilingual Large Language Models to Generate Code-Mixed Texts: The Case of South East Asian Languages, *arXiv* Zheng-Xin Yong, Ruochen Zhang, Jessica Zosa Forde, Skyler Wang, **Arjun Subramonian**, Holy Lovenia, Samuel Cahyawijaya, Genta Indra Winata, Lintang Sutawika, Jan Christian Blaise Cruz, Yin Lin Tan, Long Phan, Rowena Garcia, Thamar Solorio, Alham Fikri Aji

Weisfeiler and Lehman 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, Angela Fan, Christopher Akiki, ..., **Arjun Subramonian**, ..., Yacine Jernite, Younes Belkada, 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

Robust Model-Agnostic Meta-Learning for Binary Content Moderation Tasks in Natural Language Processing, *URL* Arjun Subramonian\*, John Arthur Dang\*

#### **Invited Talks**

- 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**

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
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

#### Honors

2021 - Intersectionality Panel, NAACL; Video

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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
2016 - Award of Achievement, Association for Computing Machinery, San Francisco Bay Area Professional Chapter
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## Service

- Reviewing:
  - Conferences: WebConf 2024, LoG 2023, NeurIPS Ethics 2023, NeurIPS Datasets & Benchmarks Track 2023, NeurIPS 2023, KDD 2023, FAccT 2022, FAccT 2022
  - Workshops: Queer in AI @ ACL 2023, WOAH @ ACL 2023, TrustNLP @ ACL 2023, GLFrontiers @ NeurIPS 2022, TSRML @ NeurIPS 2022, TrustNLP @ NAACL 2022, SRW @ NAACL 2022, WOAH @ NAACL 2022, BigScience @ ACL 2022
- 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

## • Conference organization:

- NeurIPS Affinity Workshops Chair (2022, 2023)
- KDD EDI Day Chair (2023)
- NAACL Accessibility Chair (2022)

#### • Workshop organization:

- Queer in AI: AAAI 2021, ICML 2021, NeurIPS 2021, FAccT 2022, NAACL 2022, ICML 2022, ACL 2023
- Collaboratively Developing Evaluation Frameworks for Queer AI Harms @ FAccT 2022

## • 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 and organizer
- ACM at UCLA EDI director
- ACM AI at UCLA outreach director
- "You Belong in AI!" podcast creator and producer

# 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)