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, *arXiv* Anaelia Ovalle, **Arjun Subramonian**, Vagrant Gautam, Gilbert Gee, Kai-Wei Chang AIES 2023 (28.9% acceptance rate) Oral (7.7% acceptance rate)

### Bound to the Bounty: Collaboratively Developing Evaluation Frameworks for Queer AI Harms

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, arXiv Arjun Subramonian, Xingdi Yuan, Hal Daumé III, Su Lin Blodgett Findings of ACL 2023

[Best Paper] Queer In AI: A Case Study in Community-Led Participatory AI, *URL* Organizers of QueerInAI, Anaelia Ovalle, **Arjun Subramonian**, ... 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, 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, 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**

Weisfeiler and Lehman Go Measurement Modeling: Probing the Validity of the WL Test 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

Explaining Attention-Based Graph Neural Networks Post-Hoc With Attention Flows, *URL* Paymon Haddad\*, **Arjun Subramonian**\*, Brian Tagle\*

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 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 Queer in AI National AI Advisory Committee Briefing; Event, Briefing, Press
- 2023 Partnership on AI Inclusive Data Collection Workshop
- 2023 Data & Society Salon Series on Responsible AI in Government
- 2022 Accessibility and Inclusion Panel, Neuromatch Academy; Video

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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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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: NeurIPS Datasets & Benchmarks Track 2023, NeurIPS 2023, KDD 2023, FAccT 2023, LoG 2022, FAccT 2022
- Workshops: 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)