Melanie Subbiah

New York, NY, 415-350-4761, melanie.s.subbiah@gmail.com

I enjoy creating AI systems that are capable of creative behavior and problem solving. I value ethical and sustainable approaches to AI research.

EDUCATION

Doctor of Philosophy in *Computer Science* Sep. 2020 - *present*
Master of Science in *Computer Science* Sep. 2020 - May 2022
Columbia University, New York, NY
Advisor: Professor Kathleen McKeown
Honors:
- Amazon CAIT PhD Fellowship 2023
- NSF GRFP Honorable Mention 2021 (Comp/IS/Eng - Natural Language Processing)
- Best Paper Award at NeurIPS 2020 (*Language Models are Few-Shot Learners*)
- Presidential and SEAS Fellowship 2020

Bachelor of Arts in *Computer Science* Sep. 2013 - Jun. 2017
Williams College, Williamstown, MA
Thesis: *Using Text Abstraction and LSTM Language Models for Domain-Independent Narrative Generation*
Advisor: Professor Andrea Danyluk
Honors:
- Commencement Phi Beta Kappa Student Speaker
- Highest Honors and Best Thesis Presentation award in Computer Science
- Magna Cum Laude, Phi Beta Kappa, Sigma Xi
- Honorable Mention award in short story writing

EXPERIENCE

Meta, New York, NY Jun. 2022 - Aug. 2022
Research Intern, AI for Augmented Reality Input & Interaction
- Developed deep learning strategies to interpret EMG data for human-computer neural interfaces.
- Conducted an independent research project for the team (formerly CTRL Labs).

OpenAI, San Francisco, CA Aug. 2019 - Aug. 2020
Member of Technical Staff, Language
- Designed and built the evaluation suite for GPT-3 and engineered the model to perform efficiently across many tasks, co-first-author on the GPT-3 paper (*Language Models are Few-Shot Learners*).
- Consulted with customers following the OpenAI API launch, which provided few-shot access to pretrained language models.

Apple, Cupertino, CA
Machine Learning Engineer, AI Research Sep. 2017 - May 2019
- Directed research in autonomous systems and generative language models.
- Led projects on data center HVAC efficiency, reward function design, domain randomization for sim-to-real transfer in computer vision, and effective QA methods for crowdsourced annotated data.

RESEARCH

G Wang, L Chillrud, K Harwood, A Ananthram, **M Subbiah**, K McKeown. *Check-COVID: Fact-Checking COVID-19 News Claims with Scientific Evidence*. Under review for the Association for Computational Linguistics; July 2023; Toronto, Canada.

A Storek, **M Subbiah**, K McKeown. *Unsupervised Selective Rationalization with Noise Injection*.

Under review for the Association for Computational Linguistics; July 2023; Toronto, Canada.

M Subbiah, A Bhattacharjee, Y Hua, TS Kumarage, H Liu, K McKeown. *Detecting Harmful Agendas in News Articles*. ArXiv; Jan 2023.

S Levy, E Allaway, **M Subbiah**, L Chilton, D Patton, K McKeown, WY Wang. *SafeText: A Benchmark for Exploring Physical Safety in Language Models*. Proceedings of Empirical Methods in Natural Language Processing; Dec 2022; Abu Dhabi, UAE.

A Mei, A Kabir, S Levy, **M Subbiah**, E Allaway, JN Judge, D Patton, B Bimber, K McKeown, WY Wang. *Mitigating Covertly Unsafe Text within Natural Language Systems*. Findings of Empirical Methods in Natural Language Processing; Dec 2022; Abu Dhabi, UAE.

M Subbiah, K McKeown. *Understanding Identity Signalling in Persuasive Online Text*. Presented at ICWSM, International Workshop on Social Sensing (**talk** and **vision abstract**); Jun 2021; Online.

TB Brown*, B Mann*, N Ryder*, **M Subbiah***, et al. *Language Models are Few-Shot Learners*. Presented at Neural Information Processing Systems (**Best Paper Award**); Dec 2020; Montreal, CA.

M Subbiah, J lesser, N Apostoloff. *Augmenting Training Data with Simulated Images*. Presented at Neural Information Processing Systems, Women in Machine Learning Workshop (**poster**); Dec 2018; Montreal, CA.

M Maher, **M Subbiah**, N Apostoloff. *Cascaded Dataset QA*. Presented at Neural Information Processing Systems, Women in Machine Learning Workshop (**talk** and **poster**); Dec 2018; Montreal, CA.

UC Nygaard, Z Li, T Palys, B Jackson, **M Subbiah**, M Malipatlolla, V Sampath, H Maecker, MR Karagas, KC Nadeau. *Cord blood T cell subpopulations and associations with maternal cadmium and arsenic exposures*. PLoS One. 2017 Jun 29;12(6):e0179606. doi: 10.1371/journal.pone.0179606. PMID: 28662050; PMCID: PMC5491028.

Co-organizer of ICLR Workshop on Enormous Language Models. 2021.

SPEAKING

Pearson Publishing's AI Catalyst Conference: NLP with ChatGPT. 2023.

Invited talks on ChatGPT for Columbia University Board of Trustees, Deans, and Faculty. 2023.

SuperDataScience podcast: GPT-3 for Natural Language Processing. 2022.

Wired 5 Levels of Difficulty video: Machine Learning. YouTube. 2021.

Invited seminar talks on GPT-3 at Stanford University and New York University. 2020.

Invited Computer Science colloquium talk at Williams College. 2020.

Williams College Commencement Phi Beta Kappa speaker. 2017.

TEACHING

TA (and a lecture) for *Natural Language Generation and Summarization*. Columbia University. Fall 2022.

Tutor for *Introductory Computer Science* and *Discrete Math*. Columbia University Athletics. 2021.

TA for *Introductory Computer Science* and *Data Structures*. Williams College. 2014-2017.

MENTORING

Williams College CS Undergraduate Buddy	2022
Lumiere Education Research Mentor	2021
OpenAI Scholars Program Development	2020

OpenAI Scholars Program Mentor	2020
Institute of International Education TechWomen Mentor	2019
Williams College Underrepresented Identities in CS Leader	2016-2017