

Sherin Muckatira

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EDUCATION

University of Massachusetts
Ph.D. in Computer Science; GPA 4.00

Lowell, Massachusetts
September 2021–Present

Arizona State University
Master of Science in Electrical Engineering; GPA 3.79

Tempe, Arizona
August 2011–May 2013

Sir M Visvesvaraya Institute of Technology
Bachelor of Engineering in Electronics and Communication; GPA:4.00

Bangalore, India
September 2007–July 2011

EXPERIENCE

University of Massachusetts
Research Assistant

Lowell, Ma
May 2023–Present

Studied and Pretrained Encoder-Decoder and Decoder-only (generative) Language Models.
Investigating the In-context Learning and Chain of Thought reasoning abilities of language models.
Parameter-Efficient Fine-tuning Studying different PEFT methods.

Teaching Assistant

September 2022–May 2023

Led lab sessions focused on C programming for undergrads and provided feedback on assignments.

Qualcomm

Senior Software Engineer

Boxborough, Ma
October 2016–December 2021

Developing firmware for the physical layer of Wireless LAN chips(Wifi 802.11 protocol).

NXP

Applications Software Engineer

Chandler, Az
June 2013–October 2016

Developed applications for Power Amplifier characterization on a Vector Signal Processor.

Center for Evolutionary Medicine and Informatics, The Biodesign Institute

Research Aide

Tempe, Az
July 2012–May 2013

Implemented Gene expression pattern annotation using SIFT feature extraction on embryonic images in the Berkeley Drosophila Genome Project (BDGP) using Bag of Words and sparse Coding Approach.

PUBLICATIONS

- [1] V. Lialin, N. Shivagunde, S. Muckatira, and A. Rumshisky, “Stack more layers differently: High-rank training through low-rank updates”, *arXiv preprint arXiv:2307.05695*, 2023.
- [2] S. Muckatira, “Properties of winning tickets on skin lesion classification”, *ECCV WiCV Workshop*, 2020.
- [3] Q. Sun, S. Muckatira, L. Yuan, S. Ji, S. Newfeld, S. Kumar, and J. Ye, “Image-level and group-level models for drosophila gene expression pattern annotation”, *BMC bioinformatics*, vol. 14, no. 1, p. 350, 2013.

SKILLS

Python, Pytorch, sklearn, Machine Learning, Deep Learning, NLP, Transformers, C, C++, Perforce, Git, Matlab, Embedded Systems, Signal Processing, Data Analysis, Software development