NEELIMA PRASAD

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EDUCATION

Ph.D., Computer Science 2023 -Present
University of Colorado Boulder; Advisor: Dr. Danna Gurari
M.S., Computer Science 2023 -2025
University of Colorado Boulder; Advisor: Dr. Danna Gurari
B.S., Mathematics & Computer Science 2018-2021
University of California San Diego

WORK EXPERIENCE

AI Engineer and Research Intern - *LightTable)* Jan 2026- May 2026

Computer Scientist - *Naval Air Systems Command (NAVAIR)* Mar 2022- Jul 2023
Full time position, Secret level of clearance obtained
Project: War-Gaming
Created many v. many scenarios using simulation software (C#). Implemented deep reinforcement learning techniques to solve these scenarios by determining the optimal path for a protected entity. Developed algorithms using Python to run simulations simultaneously and generate plots to illustrate the algorithms' success. Used **Pytorch, TensorFlow, Seaborn**
Project: Software Engineer for Simulation Developers
Created a working database using **SQL** and **SQLite** to store radar and emitter information used for simulation development. Designed the front end of the database using **HTML**, **jQuery**, and **CSS**.
Tasking: Radar Engineer/Operator
Worked to operate and calibrate radar simulator systems used for electronic warfare countermeasure scoring

Summer Research Intern- *Los Alamos National Laboratory (LANL)* 2018-2021
Project: Cryptography
Worked to evaluate lattice-based post-quantum cryptography signature schemes.
Learned and use techniques from homomorphic computation to develop those schemes which extend quantum key distribution mechanisms to allow encryption, decryption, and signature verification on a global level
Project: Network Analysis
Worked on the statistical, graph theoretic and algorithmic analysis of authentication events on large local area networks. Wrote python scripts that implement various network and time series analysis metrics to analyze datasets. Explored new visualization approaches in understanding temporal network dynamics
Project: Astrophysics
Analyzed Gamma-ray burst data from LIGO using MatLab. Learned concepts in relativity and

CURRENT RESEARCH

PhD Researcher in the Image and Video Computing Group
Research interests include artificial intelligence, computer vision, deep learning, natural language processing.
Current Research involves image and video segmentation, multi object tracking, data augmentation and model design
Familiar with **LLMs**, **PyTorch**, utilizing HPCs, and cloud computing
Link to Research Group: https://dannagurari.colorado.edu/research-group/

SKILLS

Programming Languages
Python, C++, Java, C, C#, MATLAB, R, ARM Assembly, JavaScript, Swift, Julia
Programming Background
Designed websites (ReactJS, jQuery)
Built and maintained a database (SQL, SQLite)
Relevant Graduate Coursework
Computer Vision, Neuro-Symbolic Approaches to NLP, Linear programming, Machine Learning, Object Oriented Analysis and Design

PROJECTS/POSITIONS

RA (research assistant) **for Image and Video Computing Lab** Present
TA (teaching assistant) **for Data Structures, Neural Networks and Deep Learning** 2023-2025
Teach Recitation Sections, hold office hours, and write programming assignments
Department Graduate Committee Student Representative Present
Responsible for defining course content, considering new course offerings, and other issues for the graduate degree programs.
PhD student Ambassador
Part of the Computer Science Graduate Student Leadership Association, responsible to help with outreach for prospective graduate students 2024
Student lead of AI by Hand Initiative 2023
Helped design and teach the concepts of Artificial Neural Networks to students in Nigeria and India
Pomodoro Timer *(lead developer)* 2021
Developed a time management app called a Pomodoro timer with a group of ten classmates using the Agile Method, available as a web application, using **HTML**, **CSS** and **JavaScript**
Used Jest for testing, GitHub for implementation.
Machine Learning Interaction *(lead developer)* 2021
Planned and partially implemented an app that would help solve the parking crisis in campus. The app utilized object tracking and detection algorithms to count the cars entering and exiting a garage.
SuperPosition V 2021
Volunteered as a mentor for the SuperPosition V Hackathon

AWARDS

SMART Scholarship 2023
Awarded SMART scholarship for graduate studies
Incentive Award 2022
Division award received for work on my efforts on the War-Gaming project at NAVAIR
Provost Honors – 5 quarters 2021
Awarded to students each quarter for an exemplary term GPA

PUBLICATIONS/ PRESENTATIONS

Hierarchical Instance Tracking to Balance Privacy Preservation with Accessible Information 2025
Neelima Prasad, Jarek Reynolds, Neel Karsanbhai, Tanusree Sharma, Lotus Zhang, Abigale Stangl, Yang Wang, Leah Findlater, and Danna Gurari. IEEE Winter Conference on Applications in Computer Vision (WACV), March 2026.
Astrophysics Publication 2019
Lloyd-Ronning, Nicole M, et al. “Constraints on Gamma-Ray Burst Inner Engines in a Blandford–Znajek Framework.”OUP Academic, Oxford University Press, 11 Feb. 2019.
https://academic.oup.com/mnras/article/485/1/203/5315803
Innovation Challenge 2023
Wrote and presented a proposal titled Cognitive Advanced Tracking Simulator System to a panel of Subject Matter Experts for NAWCWD Department of Defense