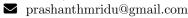
Mridu Prashanth

West Lafayette, Indiana



moliveme.github.io

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EDUCATION

Purdue University

West Lafayette, Indiana

Bachelor of Science in Computer Science Honors and Mathematics; GPA: 3.86

Aug. 2022 - Dec. 2026

- o Current Courses: Operating Systems, Real Analysis, Abstract Algebra, AI. Dean's List/Semester Honors.
- $\circ \ \textbf{Involvement} : \ President \ of \ DOSA, \ Research/Teaching \ Assistant, \ Hackathon/TEDx \ Organizer, \ Girls \ Who \ Code$

MENTORSHIP

Department of Computer Science - Purdue University

West Lafayette, IN

Undergraduate Teaching Assistant, commitment: 10-15 hr/week

Undergraduate Research Assistant, commitment: 10-15 hr/week

Aug 2023 - Present

- o CS 381 {Intro to the Analysis of Algorithms}: Conduct Practice-Study-Observation sessions, office hours, create quizzes, contribute to development of homeworks/solutions used by 300 students.
- o CS 252 {Systems Programming} & CS 240 {Programming in C}: Testing modules & handouts in git-based environment for Spring 2025 assignments used by 120 students. Held office hours, labs, submit homework solutions, answered Ed Discussion posts, coordinate in-class quizzes. Explained pointers, memory allocation, and linked lists and binary trees, scripting languages, malloc, threads, lex, yacc, C to students using pseudocode and visual aids.
- CS 193 {Tools}: Helped students navigate tools like GitHub, LATEX, the terminal, IntelliJ, debugggers etc. Graded homeworks of roughly 25 students biweekly. Conducted PSO sessions/office hours.
- WIE-WISP Tutoring Program College of Science at Purdue University Tutor

West Lafayette, IN Aug 2023 - Dec 2023

o Python: Tutored CS 177, CS 159, ENGR 161, ENGR 131/132/133. Math/Physics: precalc, Calc I/II/III, PHYS 172/221.

Girls Who Code - Purdue College Loop

West Lafayette, IN

Officer & Mentor

Spring 2023 - Present

- Oakland Academy Workshop: Core presenter. Taught 30+ high school girls HTML/CSS/JS.
- **Jefferson High School Workshop**: Developing C/C++ material for the workshop.

EXPERIENCE

IDEAS Lab - Purdue University

West Lafayette, IN

June 2023 - Present

- o Urban Fire: Modeling and Predicting them: Simulated urban fires and evaluated their causes and hot spot zones in Los Angeles, with potential to expand the method to other cities due to the proper documentation. Poster - Fall Conference.
- AI-driven Robotic Triage System: Evaluated machine learning models (neural network and others) in PyTorch to classify the acuity of a patient's condition given vital measurements. Synthetically augmented MIMIC-IV and Yale Medical Datasets using SMOTE. Generated embeddings using Google API. Created GUI for first responders using HTML/CSS.
- o Spring Undergraduate Research Conference Presenter: Awarded 2nd place in College of Science. Also showcased at the Robotics and Intelligent Systems Expo (RISE 2), awaiting review from IROS 2024.
- o AAAI 2024 Submission: Used Jupyter, Matplotlib, t-SNE to build a visualization tool for the AffectEcho.
- Personal Project: Built and evaluated a neural network in Python to predict the middle frame given left and right frames.

Lumiere Research Scholars Program

High School Researcher

Jun 2021 - Aug 2021

o Neural Style Transfer - Literature Review: Analysed CNNs & GANs for style/content extraction in neural style transfer, performed experiments.

Mathematics Research Under Prof. Marcello Lucia (City University of New York)

Jun 2021 - Oct 2021

High School Researcher o Rule of Signs - Literature Review: Illustrated intuition & watertight nature of the rule of signs & its results by Prof Levin using visualizations. Wrote a Python module to apply Rule of Signs on given polynomial.

PROJECTS

- Bad Calculator 3000: Converts infix expression to postfix and evaluates using stack. Used JavaScript/HTML/CSS.
- SearchTracker: Chrome extension (deployed) that helps save papers and google scholar profiles to aid paper review process. Also syncs to attached google sheets. Used HTML/CSS/JavaScript.
- NutritionAI: Calculates nutritional breakdown of food in picture uploaded by user using volume estimation machine learning model. For HackMIT hackathon. Used Python, JavaScript.
- Pathways: Converts external course credits to Purdue equivalents. Also recommends classes for shortest path to graduation for Computer Science. For BoilerMakeX hackathon. Used HTML/JS/CSS.
- EventScheduler: Syncs with outlook to schedule events. For HelloWorld 2023.
- Finalist at ICPC AlgoQueen Hackathon: National Level Collegiate Hackathon, 2022. Used C++.

Programming Skills

Languages: C/C++, Python, Java, x86 Assembly Language, LATEX, MarkDown, R, HTML, CSS, JavaScript Technologies: Google API, PyTorch, Keras, Pandas, Seaborn, Tensorflow, OpenGL, Git, Matplotlib, React