Mukul Agarwal

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EDUCATION

Purdue University | *West Lafayette, IN*　　　　　　　　　　　GPA: **Available on request**
Bachelor of Science in Computer Science Honors　　　　　　　　　　　*Aug 2023 - May 2027*
Bachelor of Science in Mathematics

Relevant Coursework: *Object-Oriented Programming, Computer Architecture and Systems Programming, Data Science/Analytics, Data Structures/Algorithms, Probability Theory, Linear Algebra, Real Analysis, Statistics*

School on Univalent Mathematics | *University of Minnesota | Minneapolis, MN*　　　　*Jul - Aug 2024*
Fully-funded program; learned about Homotopy Type Theory and its applications to Voevodsky's Program of Univalent Mathematics.

TECHNICAL SKILLS

Languages: Python, Rust, Java, C, C++, JavaScript/TypeScript, Haskell, OCaml, Go, HTML/CSS
Frameworks: JUnit, Unity (Test Framework), React/NextJS, Tailwind UI
Developer Tools: Git, Docker, CI/CD, Test-Driven Development

EXPERIENCE

Web Software Developer | *Pathways to Prevention* | *West Lafayette, IN*　　　　Sep 2024 - Present

- Developed a moderated commenting and rating system for users to leave comments regarding positive/negative experiences with health centers.
- Improved accessibility of website features for colorblind users and for users using screenreaders.

Relevant skills: *Web development, Full-Stack Development, DevOps*

Undergraduate Research Assistant | *Purdue ECE* | *West Lafayette, IN*　　　　Aug 2023 - May 2024

- Conducted NSF-funded research into the development of machine-learning solutions to help musicians rehearse using computer vision, audio signal analysis, and convolutional neural networks
- Designed algorithms to intake and pre-process data used to train custom computer vision models

Relevant skills: *Machine Learning, Computer Vision (OpenCV), Numpy, Pandas, PyTorch*

Software Team Lead | *Allen Eagle Robotics* | *Allen, TX*　　　　Jan 2020 - May 2023

- Led software team for BEST Robotics; used MATLAB, Python, and other tools to program a robot
- One of three business leads for robotics team: mentored younger peers as well as creating business plan, marketing, and documentation materials
- Served as elected treasurer, used software tools including Microsoft Excel and accounting systems to manage $70,000 annual team budget and expenditure

VOLUNTEERING

Hall Club Legislator | *Purdue University Residences* | *West Lafayette, IN*　　　　Jan 2024 - May 2024

- Worked with groups of students to allocate residence hall club funds and host events
- Developed plans for residence hall trips

Organizer | *PB&Joy* | *Allen, TX*　　　　Aug 2021 - May 2023

- Co-led school organization focused on creating peanut-butter and jelly sandwiches for homeless shelters.
- Co-ordinated the delivery of a record 20,000+ sandwiches in the 2022-23 school year.

Translator | *Flipping Physics* | *Virtual*　　　　Sep 2022 - May 2023

- Translated and verified English to Spanish translations for the Flipping Physics Educational YouTube channel to enable reaching a broader global audience.