

Ishani Das

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EDUCATION

University of Michigan

Computer Science BS, LSA Honors Program, GPA: 3.528

Ann Arbor, MI

Aug. 2023 – present

- Relevant Coursework: Data Structures and Algorithms, Programming and Introductory Data Structures, Algorithms & Theory of CS, Computer Organization, Discrete Mathematics.
- Clubs: Michigan Hackers (VP of Innovation), IEEE Student Chapter (VP of Corporate Relations).

EXPERIENCE

SWE Intern @ Magna Education | *React, JavaScript, Git, Jira, Full-Stack Development*

May 2024 – Aug 2024

- * Implemented the integration of WolframAlpha into our AP Calc AB quiz question generation flow for teachers, enhancing the functionality and accuracy of math quiz responses by 30%.
- * Created an API to regrade quizzes, worked with HTTP request methods and JSON data in JavaScript on React. Designed and implemented multiple UI enhancements, improving user interaction and overall platform aesthetics.

Bioinformatics Research Intern @ Mukherjee Lab | *R, GEO (Gene Expression Omnibus)*

Jul. 2021 – Sept. 2022

- * Wrote custom software to analyze how the regulation of gene expression by RNA-binding proteins may be implicated in adrenal pathology with Dr. Neelanjan Mukherjee, Assistant Professor at the University of Colorado.

PROJECTS

Assembler, Linker, & Pipelined Datapath Simulator | *C, LC-2K Instruction Set Architecture*

- * **Assembler:** Takes an assembly file of instructions and data variables that supports loads, stores, branching, and math operations as input and outputs an intermediate object file containing machine code.
- * **Linker:** Takes object files (supporting the usage of both local and global variables across files) as input to create a final executable machine code file.
- * **Pipelined Datapath Simulator:** A cycle-accurate behavioral simulator for a 5-stage (fetch, decode, execute, memory, write back) pipelined implementation of LC-2K with data forwarding and simple branch prediction.

InformedVotr | *ML, React, Flask, Full-Stack Development, Cloud*

- * Developed + deployed a website to help people better understand complicated bills and laws by summarizing raw bill text data from Congress. Integrated the Google Programmable Search Engine to allow users to explore content related to the specific bill in the media. 40 people on waitlist. [Video Demo](#).
- * <https://informed-votr.vercel.app>

CDST: Clinical Decision Support Tool | *Python, Machine Learning, AWS*

- * Developed a two-part AI-based decision support web application to assist physicians in the diagnosis process by:
(a) Mathematically determining the patients with the most similar medical history and displaying a summary of their records. (b) Using ML to give a physician feedback on their diagnosis for a patient based on the uploaded medical records.
- * Reviewed by several medical professionals as well as the creator of the 100,000-synthetic patient dataset I used to train my models with. [Demo](#).

Diabetic Retinopathy Research | *Python, Genome-Wide Association Studies*

- * Developed a custom Python software algorithm to study the influence of genes linked to common comorbidities on the development of diabetic retinopathy.
- * Discovered there is statistically significant evidence that single-nucleotide polymorphisms in the gene TULP4 may be implicated in the development of this disease.

LEADERSHIP

Founder, Head Advisor

May 2019 – Present

We Love STEM

International

- * Lead the internationally-recognized 501c3 non-profit organization with an Exec Team as well as 20+ Chapter Directors. Served 820+ students across 4 countries since its founding. Organize and oversee weekly STEM educational programs, annual Summer Camps, Guest Speaker Events, Hackathons, Fundraisers, and Community Outreach Programs.

SKILLS

Languages: C++, C, JavaScript, Java, Python, Swift, R, Arduino.

Other Interests: Video Editing, Sketching, Cooking.