KIRAN LAHIRI

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EDUCATION

University of Michigan **Ann Arbor, MI**
Bachelor of Science in Computer Science May 2025

- **Honors:** University Honors (December 2021, April 2022); William J. Branstrom Freshman Prize
- **Past Coursework: :** Computer Architecture (EECS470), Embedded Systems Design (LINK), Data Structures & Algorithms, Web Systems, Software Engineering, Computer Organization, Foundations of Computer Science, Logic Design, Intro to Behavioral Neuroscience, Principles of Cellular and Molecular Neuroscience, Programming & Elementary Data Structures, Discrete Math, Linear Algebra, Calculus III, Intro to Statistics & Data Analysis
- EECS 470: Designed and implemented a MIPS R10K-style processor in SystemVerilog within a group (LINK)

EXPERIENCE

Cantor Fitzgerald **New York, NY**
Technology Intern *June 2024-August 2024*

- Automated the fetching of 2,000+ user logs from an electronic trading platform to diagnose and detect user login issues. Implemented the program using Python, Selenium and Geckodriver, which featured multithreading, web interaction, log parsing, and file management.
- Identified an open-source machine learning toolkit that can perform log parsing and analysis as a potential AI/ML driven improvement to the firm's log parsing processes.

Apostolides Lab **Ann Arbor, MI**
Undergraduate Lab Assistant *February 2024- present*

- Contribute to research in a neuroscience lab studying the mammalian auditory system at the University of Michigan's Kresge Hearing Research Institute.
- Perform curation of calcium imaging data of neurons in the inferior colliculus of head fixed mice for a project examining sound localization in mice. This curation is facilitated by leveraging conda and suite2p, an image processing pipeline which processes raw images of the brain during behavioral experiments to perform cell registration of neurons. After registration is completed, perform manual correction of the suite2p output so classification of regions of interest is accurate.
- Perform a statistical analysis of neuronal imaging data collected in passive listening sessions by running MATLAB scripts that calculate the Pearson correlation coefficient to find significance within the data.

University of Michigan Solar Car Team **Ann Arbor, MI**
High Voltage Division Member October 2023-present

- Work on selected division related projects in preparation for the team's participation in solar races, including for the 2024 American Solar Challenge and for the upcoming 2025 World Solar Challenge.
- Developed a battery simulation model that investigates the efficiencies of the car's battery pack when comparing various candidate battery cells for the upcoming race cycle. (C++).
- Using Siemens NX, completed computer-aided design of a sample supermodule of a battery pack using the specifications of an Amprius cell.

Lynred USA **Fairfield, NJ**
Engineering Assistant May 2023 – August 2023

- Developed a GUI providing user controls to an infrared detector for an infrared camera product. Development included packetizing/depacketizing data transported through UDP protocol and the design and implementation of the user interface. The GUI enabled customers to send commands down to the infrared detector through an application launched on their desktop. (C++ & Qt).
- Developed an application that robustly collects data from an accelerometer to be attached to a cooled infrared detector through the implementation of a circular buffer data structure. The application enabled an analysis of the functionality of the accelerometer by reading in live input data from movement sensed by the accelerometer, and then calculating statistics in real time. A circular buffer data structure has a fixed size and overwrites itself to retain its size, so the implementation enables statistical analysis to occur on smaller, relevant spurts of data pertaining to events observed by the accelerometer and at interval lengths configurable by the user of the program. (C++).

TECHNICAL SKILLS

Languages: C/C++, Verilog/SystemVerilog, Python, JavaScript, SQL, MATLAB, HTML, CSS
Frameworks/Libraries: REST API, NumPy, Flask, React, Qt, Selenium
Technologies: STM32, Linux, Quartus Prime, ModelSim, SPI, I2C, UART, UDP, Git