Diya Saha

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Education

University of California, Irvine **Sep. 2023 – Jun. 2025**
Master of Science in Computer Science

University of California, Santa Cruz **Sep. 2019 – Jun. 2023**
Bachelor of Science in Computer Engineering with specialization in Robotics; Minor in CS *3.7/4.0*

Experience

DSights.Inc **Summer 2022**
Software Research Intern *Remote*

- Used Natural Language Processing Techniques to automatically compare restaurant menus from web pages.
- Explored different ideas for a prototype to help our client find similarities between restaurant menus based on words and phrases and submitted a written report summarizing the findings.
- Conducted analysis on the menus publicly available and explored different methods to visualize data using Python libraries like Matplotlib, Pandas and Seaborn, and Google sheets.

Tech4Goods Labs **April 2021 – September 2022**
Undergraduate Research Assistant *Santa Cruz, CA*

- Analyzed different methods of youth career mentorship through the organization, Your Future Our Business(YFIOB). Built low and high-fidelity prototypes of portals using Figma.
- Worked efficiently in a team setting to create a grant study proposal to be presented to the Institutional Review Boards(IRB) to receive approval to conduct the aforementioned research.

Mentor Collective **August 2021 – June 2022**
Trained Mentor *Santa Cruz, CA*

- Mentored over 100 UCSC students to organize their academic curriculum and help them navigate through different student services provided by UCSC.
- Conducted Zoom meetings as well as phone calls to assist these students and answer any queries they have.

Projects

Determining readmission rate on diabetic patients | *Python, Pandas, Matplotlib, Sklearn* **September 2024**

- Utilized a comprehensive decade-long dataset from 130 US hospitals to analyze patterns related to the early readmission of diabetic patients, employing classification, ensemble, and neural network models.
- Implemented data imputation, oversampling techniques to address class imbalance, and applied feature selection for model optimization.
- Link to GitHub repository

Object Oriented Interactive Game, Frog Frenzy | *Verilog, Vivado, FPGA board* **November 2022**

- Coded an Object Oriented Playable game called Frog Frenzy (similar to Flappy Bird) using Verilog modules
- Connected the code to work with an FPGA board and displayed it on a VGA monitor with the help of pixels.
- Link to GitHub repository

UAV Model Simulator, Evade and Avoid | *Python, GUI, PyQt5, Matplotlib* **March 2023**

- Developed and integrated evasive maneuvers functionality into the flight simulator, implementing new control laws to ensure avoidance of explosive forces along the aircraft's trajectory.
- Enhanced autopilot model by incorporating a robust state machine and refined waypoint following algorithm, resulting in visually and computationally effective aircraft maneuvers while avoiding potential explosive hazards.
- Link to GitHub repository

Technical Skills

Proficient in Programming Languages: Python, Java, C/C++, HTML/CSS, JavaScript, SQL, Assembly
Developer Tools: VS Code, Eclipse, Google Cloud Platform, Amazon Developer Tools, Vivado, Figma, GitHub
Technologies/Frameworks: PyTorch, TensorFlow, Keras, Scikit-learn

Honors / Certificates

- Received Dean's Honor on multiple quarters for being in the top 15% of my class.
- Google Professional Certification for Data Analytics, Google Professional Certification for UI/UX Design
- Completed Coursera Machine Learning Specialization by Andrew Ng and Google's Introduction to Generative AI