Ritul K. Soni

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EDUCATION

University of Illinois Urbana-Champaign Champaign, IL

Bachelor of Science in Computer Science + Economics ***GPA: 3.91/4.0 Dean's List*** *Expected May 2024*

Relevant Coursework: Data Structures, Algorithms, Software Design, Data Visualization, Computer Systems

EXPERIENCE

I-Heart Full Stack Mobile App Developer February 2023 – May 2023

Carle College of Medicine *Champaign, IL*

- Designed and developed an interactive, user-friendly interface that enables patients to access animations, descriptions of heart defects, and visualizations of their heart anatomy, physiology, and conditions.
- Implemented a customized, three-dimensional digital viewer for the heart models in the app, and built the backend to store all 3D models of hearts with diseases, ensuring efficient storage and retrieval of patient data. This app enables physicians to better communicate cardiac abnormalities, discuss surgical management and options, and helps patients better understand their condition, making more informed decisions about their own care.

Project Manager (CS222 & CS124 Honors) January 2022 – Present

University of Illinois Urbana-Champaign *Champaign, IL*

- As project manager for a course on agile software development, successfully led teams of students through semester-long projects and taught the use of scrum boards and Git version control.
- Managed multiple teams of 5 people in various projects, ensuring timely completion of project timelines, resources, and deliverables. Demonstrated strong communication abilities and effectively managed teams, solidifying my understanding of agile practices and ability to mentor team members.

PROJECTS

Neural Style Transfer Full Stack Web Application | *TensorFlow React JavaScript* Aug 2022 – Present

- Composed a Deep Neural Network-powered website using React and TensorFlow that allows users to apply the style of various famous artwork to their own photos in real time.
- Designed and implemented the frontend of a neural style transfer website using React, providing a seamless and intuitive user experience through thoughtful design and implementation of the website's interface. Demonstrated expertise in web development with React and the ability to collaborate effectively on a cross-functional team.

Open Flights Dataset Analysis | *C++* November 2022 – December 2022

- Utilized OpenFlights dataset of over 14,000 airports to design and develop a graph-based solution for airport and route analysis. Implemented an adjacency list representation for optimized runtime performance and efficiency.
- Produced a command line interface for users to run algorithms to find shortest path between airports, busiest airports, and number of airports connected in a single component (network).
- Implemented Dijkstra's & PageRank algorithms in C++ for data analysis. Composed efficient data structures that improved runtime performance by over 200% to analyze and extract valuable insights from the parsed data.

RESEARCH

Argonne National Laboratory Researcher August 2020 – May 2021

Argonne National Laboratory *Lemont, IL*

- Conducted research on gold nanoscale particle synthesis and light absorption with UV spectroscopy at Argonne National Laboratory's Center for Nanoscale Materials, in collaboration with Dr. Xuedan Ma
- Presented research findings to a panel of scientists from around the world Link: https://tinyurl.com/5njjhunm

TECHNICAL SKILLS / AWARDS

Advanced Languages: C/C++, Python, Javascript/HTML/CSS **Intermediate Languages**: Kotlin, Java, Bash
Frameworks: Flutter, React, Flask **Technologies/ Skills**: Git, GitHub Actions, Scrum, Docker, Tensor Flow
Interests: Machine Learning, Full Stack Development, Quantative Finance, Frontend Development
Spoken Languages: English, Hindi, Gujarati, Urdu, Spanish
Awards: ● 1st Place in State and 10th Nationally in Future Business Leaders of America (FBLA-PBL) Network Design Competition ● 2nd Place in FBLA State Management Information Systems ● UIUC's Dean's List