Rohit Kundu

609-907-1908 | rkundu3@illinois.edu | linkedin.com/in/rkunds | github.com/rkunds | rohitkundu.dev

Education

University of Illinois at Urbana-Champaign — Urbana, IL
Bachelor of Science, Double Major in Computer Science and Applied Mathematics — *Aug 2021 - Expected May 2024*

Experience

Undergraduate Researcher/Developer — December 2021 - Present
Caesar Research Group — *Urbana, IL*
- Student developer for the LUDI Project - a service to deliver computer science education resources
- Streamlined user sign-up and authentication process through adding two additional authentication methods using Google OAuth and Github OAuth using the Passport.js library
- Bridged functionality between Express backend and React client to integrate new authentication methods
- Wrote documentation and maintained codebase to remove bugs and ensure proper functionality

Co-Fouder of Youth Program& Technology Lead — March 2020 - August 2021
New Jersey School Board Association & West Windsor Township — *West Windsor, NJ*
- Developed a 20-week math curriculum for students in 2nd to 7th grade which encompasses Common Core Standards for New Jersey while encouraging critical thinking and practical applications
- Engaged in constant communication with educators and administrators to successfully integrate the program curriculum into classrooms in the Trenton school district

Challenge Participant — June 2020 - July 2020
Deloitte — *New York City, NY*
- Participated in the 2020 Deloitte Team Tech Challenge and created a project proposal to improve the efficiency of medical supply chains.
- Collaborated in small groups and worked with industry leaders within Deloitte to create a final deliverable based on research and data analysis in under a month.
- Evaluated the efficacy of solutions involving high-level ideas of Artifical Intelligence and Data Analytics

Projects

Style Share | *Firebase Firestore, Google Cloud Platform, Tensorflow, React.js, Redux, Three.js* — April 2022
- Collaborated on app to allow users to create 3D scenes and stylize them using the style of another image
- Utilized a machine learning model in order to copy the style of an image, and apply it to the other
- Developed the client app using React while using Redux to share information between UI elements
- Created API to handle user authentication with Google OAuth and image sharing functionality
- Used Firebase Firestore to store user data, and Google Cloud Storage Buckets to store stylized images
- Dockerized both client and backend applications, and deployed containers using Google Cloud Run

Infected & Detected | *TensorFlow, Flask, MongoDB* — February 2022
- Awarded best Community and Sustainability Hack out of 200 teams at Hack Illinois 2022
- Designed an application to detect infected plants so farmers can identify outbreaks of disease in their crops
- Created API to populate database with data from the machine learning model in a local MongoDB database
- Developed functions to transform data into a GeoJSON format, which is served to a MapBox Application
- Created the "Gallery" webpage to display images of infected plants fetched from the database

CharHead | *C++, Catch2, LLVM* — December 2021
- Developed an esoteric language defined by a set of symbols that can execute complex programs
- Created a just in time compiler using the LLVM framework for program execution, programs can also be run using a standard interpreter written in C++
- Implemented CLI interface to allow users to either input instructions directly or choose a file to execute
- Wrote unit tests to achieve 100% coverage of the interpreter while accounting for edge cases

Technical Skills

Languages: Java, Python, C, C++, JavaScript, HTML/CSS, SQL
Tools: Node.js, Catch2, Flask, Git, React, Express, Google Cloud Platform, Firebase, AWS, Docker, MongoDB, GDB