Ranvir Singh

Aspiring Computer Engineer & Full-Stack Developer
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EDUCATION

University of California, Merced, Merced, CA *Expected-May-2022*
Bachelor of Sciences: Major in Computer Science and Engineering

Relevant Coursework:
Data Structures (Fall 2019), Algorithms (Spring 2020), Operating Systems (Fall 2020), Human Computer Interaction (Fall 2020), Computer Organization and Assembly Language (Spring 2020), Discrete Mathematics

KEY SKILLS

Languages: Python, C++, C, Java, HTML, CSS, JavaScript
Frameworks/Technologies: Django, Git, TensorFlow, OpenCV, React
Other skills: Problem Solving, and Working in team environment

INVOLVEMENT

Association for Computing Machinery, Merced, CA *Aug 2019-Present*
Member

- Work on coding projects and attend workshops to further develop technical and professional skills
- Tour tech companies in the San Francisco Bay Area to familiarize with company culture
- Help computer science students with courses such as data structures and computer organization

PROJECTS

Coursinary | Web Application *(Team Project)* *May 2020-Present*

- Collaborated with a team to build a platform where UC Merced students can access course information from other students who already took the course
- Utilized Django framework with ModelForms and SQLite database and deployed through Heroku
- Surveyed volunteers for feedback on fixing bugs and implementing suggested features

Image Classifier | Machine Learning GUI *(Team Project)* *June 2020-July 2020*

- Constructed a graphical user interface where the program classifies the uploaded image as a dog or cat
- Implemented with a slightly modified AlexNet architecture using Tensorflow, Keras, and Tkinter
- Optimized the model by constantly improving the model architecture to an accuracy of 95.65%
- Image classifier can be further expanded to identify different people in a picture which can make searching for particular picture in image gallery easier.

Searching/Sorting Visualizer | Web Applications *(Individual project)* *Dec 2019-Jan 2020*

- Launched a web application that visualizes searching and sorting algorithms
- Programmed the application with React and wrote a description of the theory behind the algorithms
- Searching/ Sorting visualizer provided a teaching tool for students learning data structures and searching and sorting algorithms through visual representation.

Impulse pathfinder | Web application *(Team project)* *Feb 2020- Mar 2020*

- Created an app that visualizes searching algorithms in an interactive way using pathfinding approach.
- Utilized React, node, JavaScript in the making of the application and listed complete working of different algorithms
- Implemented recursive map algorithms to generate horizontal, vertical, and random maps in the app.
- Impulse pathfinder can be improved upon and implemented using real-world maps to track real objects.