**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.