

SAGAR BAGWE

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EDUCATION

University of Southern California, Los Angeles, USA

Aug 2021-May 2023

Candidate of Masters of Science in Computer Science

Dwarkadas J. Sanghvi College of Engineering, Mumbai, India

Aug 2017-May 2021

Bachelor of Computer Engineering with Distinction (CGPA 9.56/10)

Relevant Courses: Data Structures, Analysis of Algorithms, Machine Learning, Artificial Intelligence, Big Data Analytics, Relational Database, Computer Networks

PROFESSIONAL EXPERIENCE

Stratzy, Mumbai, India

Apr 2019-Jul 2019

Full Stack Web Developer

- Designed the schema for maintaining and storing strategies used for algorithmic trading using Mongoose for MongoDB which was used for determining an optimum stop-loss and trigger price for an order.
- Developed an e-commerce portal using ReactJS and ExpressJS used by the customers to buy and sell their strategies.

ACADEMIC PROJECTS

Handwriting Cloning and Personality analysis

May 2021

- Developed a system to analyze and extract handwriting features and can replicate the same.
- Developed modules for offline character segmentation and pen trajectory detection with Python using OpenCV.
- Trained a model to recognize the segmented handwritten characters with an accuracy of 82% using convolutional neural networks.

Stacked ensembling approach for COVID-19 detection using X-ray images

Sep 2020

- Researched on the current testing systems, their accuracy and turn-around time.
- Identified the shortcomings of the convolutional neural networks based on the previously published work.
- Designed an ensemble model for detection of Covid-19 powered by four CNN models such as VGG-19, InceptionResNet V2, SE-ResNeXt50 and DenseNet-121 using TensorFlow and Keras on Google Colab.
- Co-authored a paper on the same highlighting the improved sensitivity of the ensembled model which can be helpful for medical diagnosis. (<https://doi.org/10.1007/s13246-020-00952-6>)

Computer Programming Exam Portal

Feb 2020

- Designed a paperless solution for conducting C programming exams during my undergraduation.
- Implemented a server for handling concurrent requests of over 600+ students using JavaScript and Python.
- Automated the score generation process reducing the paper correction time by 55%.
- Designed and realized a user-friendly interface for the entire online platform with ReactJS.

TECHNICAL SKILLS

- Languages: C, C++, Java, Python, JavaScript, HTML, CSS, JavaScript
- Frameworks: Apache Spark, TensorFlow, Keras, OpenCV, React, Node.js, Redux, Flask, Django
- Databases: SQL, MongoDB,
- Other: Anaconda, Git, GitHub, Jupyter Notebook, Google Colab, Rest APIs, Linux

LEADERSHIP

Mentor, Unicode, Dwarkadas J. Sanghvi College of Engineering

Aug 2018-Aug 2020

- Educated a group of sophomore year student at Dwarkadas J. Sanghvi about web development and helped them get started with new technologies as a member of technical committee 'Unicode' for 2018-2020.

Head, Creatives committee, 2nd ICACTA 2020

Dec 2019-Feb 2020

- Led a team of 10 to create digital advertising content and handle the aesthetic aspect of the '2nd International conference on Advanced Computing Technologies and Applications' as a member of organizing committee.