

SAGAR BAGWE

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SKILLS AND TECHNIQUES

Programming Languages: Python, C, Java

Frameworks: Apache Spark, TensorFlow, Keras, OpenCV

Databases: MySQL, MongoDB, PostgreSQL

Web Development: HTML, CSS, React, JavaScript, Angular, Node.js

Other: Anaconda, Swift UI, GitHub, Google Colab, REST APIs, Linux

EDUCATION

University of Southern California, Los Angeles, USA

Aug 2021 - May 2023

Candidate of Masters of Science in Computer Science – **CGPA 3.66/4.0**

Dwarkadas J. Sanghvi College of Engineering, Mumbai, India

Aug 2017 - May 2021

Bachelor of Computer Engineering with Distinction – **CGPA 9.56/10**

Courses: Analysis of Algorithms, Relational Databases, Data Structures, Distributed and Parallel Systems, Networking

PROFESSIONAL EXPERIENCE

C3 AI, California, United States

May 2022 - Aug 2022

Software Engineering Intern

- Built an application that helps users unify fragmented Environmental, Social and Governance (ESG) data, identify priority ESG issues and track progress towards resolving them, reducing the ESG report generation time by 85%.
- Led the data modelling process for storing and **calculating the impact factor of an ESG issue** having 50+ variables affecting its value.
- Implemented business **logic for tracking the progress of ESG issues** by providing detailed visualizations like interactive bar charts using React, Redux, and C3 AI application development platform.

Stratzy, Mumbai, India.

Apr 2019 - Jul 2019

Full Stack Web Developer

- Devised a schema for maintaining and storing over 50 strategies employed for algorithmic trading using Mongoose for MongoDB which helped determine optimum stop-loss and trigger prices of orders.
- Created an e-commerce portal using React and Express.JS for customers to buy and sell strategies.

PROJECTS

Image Processing – Handwriting Cloning and Personality analysis

Python, OpenCV

- Developed a system to effectively analyze, extract and replicate 15 different handwriting features.
- Built modules for **offline character segmentation and pen trajectory detection**.
- Trained a model to recognize the segmented handwritten characters with an accuracy of 82% using convolutional neural networks.

Machine Learning – Stacked ensembling approach for COVID-19 detection

Python

- Researched on the existing COVID-19 testing systems and 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**.
- Co-authored a paper on the same highlighting the improved sensitivity of 99.40% for the ensembled model which can be helpful for medical diagnosis. (doi.org/10.1007/s13246-020-00952-6)

Web Application – Computer Programming Exam Portal - [Demo](#)

Node.js, React, Python

- Designed a **paperless solution** for conducting C programming exams during my undergraduation.
- Implemented a server for handling **concurrent requests of over 600+ students**.
- Automated the score generation process reducing the paper correction time by 55%.

Web Application – Stocks Portfolio App

Node.js, Angular

- Created a responsive web application for creating and managing stocks portfolio in with real-time updates.

IOS Application – Stocks Portfolio App – [Demo](#)

Swift

- Developed an IOS application for stock portfolio management with real-time updating graphs and news.

CO-CURRICULAR

- Led a team of 10 to create digital advertising content for the '2nd International Conference on Advanced Computing Technologies and Applications' as a member of organizing committee during undergraduation.
- Mentored a group of 10 students as a part of technical committee making students acquainted with new technologies.