MAHAVIR CHANDALIYA

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EDUCATION

San Jose State University, San Jose, CA   **Jan 2022-Present**
Pursuing Master's in Computer Engineering.
D.J. Sanghvi College of Engineering, Mumbai University, India   **Aug 2016 -Nov 2020**
Secured Bachelor of Computer Engineering.   **(CGPA: 7.29/10)**
Relevant Coursework: Applied Maths, Algorithms and Data Structures, Machine Learning, Data Mining and Big Data.

PROJECTS

Blood Analyzer Using Image Processing and Computer Vision
- Developed an Automated Blood Analyzer as final year project during undergrad which returns Haemoglobin level, RBC, WBC and Platelet count in the blood from a microscopic blood sample image.
- Implemented the application in Python using various libraries like NumPy, Pandas etc. Analyzed the data from each blood-cell image using Image Processing Algorithms as well as developed a GUI using tkinter.

Book Genre Prediction
- Automated genre classification in literature from book summaries. I contributed in pre-processing the datasets removing stop-words, stemming and created word embedding using different vectorizers like TFIDF and Count-Vectorizer, tested various models on the data and later implemented multilabel classification using Linear SVC.
- After comparing the results, we found that SGD(Tri-gram) and LSVC(Bi-gram) performs better than rest of the models.

Recommender Systems
- Developed a Popularity-based, Model-based, Content-based and Classification-based recommender systems using python's pandas, NumPy and sklearn libraries and evaluated the system using various performance metrics.
- Used Logistic Regression for Classification-based filtering, Nearest Neighbors for Content-based filtering and SVD matrix method for Model-based filtering. Datasets used for analysis includes 100k MovieLens dataset, MTcars dataset, restaurants and cuisine datasets etc.

Age, Gender, Emotion Prediction using Facial Data
- Built an application using Python, Keras, OpenCV that detects faces from a webcam and predicts user's Age, Gender and Emotion in real time using deep learning models. Used MTCNN algorithm based on FaceNet for detecting faces and python's cv2 library for capturing video and rendering predictions on the screen.

PUBLICATIONS

Social Distancing Detection using Computer Vision
- Research paper on Social distancing detection by continually monitoring the distance between people in a public place to enforce social distancing. Developed using Tensor flow, OpenCV and Python, the application detects people on a live video feed from a CCTV camera, highlights the person if social distancing norms are broken.

WORK EXPERIENCE

NRAT Student Assistant at San Jose State University (June 2022 - Present)
- Working as a Student Assistant for E-campus department at San Jose State. Providing support and resolving queries regarding instructional software used in the school for undergraduate and graduate programs.
- Instructional software includes Canvas, Zoom, Qualtrics, Proctorio, Google applications, Camtasia, Adobe CC etc.

TECHNICAL SKILLS

- Python, C, C++, HTML, CSS, Java, JavaScript, SQL, Node, React, React Native.
- Experience with Tensor flow, Spark, Tableau, Jupyter Notebook, AWS, Linux, Git and GitHub.

CO-CURRICULAR & EXTRA-CURRICULAR ACTIVITIES

- Winner of AI Social hackathon 2022 by Intel. Won in the ML track where we deployed a Random Forest model to predict whether freshwater is consumable using Intel's infrastructure, MLFlow and Python libraries.
- Volunteered at IDF (Indian Development Foundation), an NGO for Education and Health welfare in Mumbai, devoted 75 hours of community service through health drives and educational events in 2018 – 2019.
- Participated in Coding Hackathons and various Coding Competitions online and also took part in various technical workshops such as Raspberry Pi and Python workshop (Mar 2017), Ethical Hacking and Cellular Security (Oct 2016).