VANSH JAIN

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EDUCATION

University of Southern California, Los Angeles, California **Aug 2022-May 2024**
Candidate for Masters in Applied Data Science for fall 2022. **(CGPA 3.82/4.0)**
Relevant Courses: DSCI 551: Foundations of Data Management, DSCI 552: Machine Learning for Data Science, DSCI 553: Foundations of Data Management, CSCI 566: Deep Learning and its Applications, CSCI 585: Database Systems

Bharatiya Vidya Bhavan's Sardar Patel Institute of Technology, Mumbai, India **Aug 2018-Jun 2022**
Candidate for Bachelor of Technology - Electronics and Telecommunication with *Distinction* **(CGPA 9.83/10)**
Relevant Courses: Applied Mathematics, Machine Learning and Artificial Intelligence, Statistical and Computational Lab, Fundamentals of Data Structures and Algorithms, Database Management Systems, Object Oriented Programming, etc.

TECHNICAL SKILLS

- **Programming Language and Concepts**: Python, Java, JavaScript, Data Analysis, Statistics, Machine Learning, Deep Learning, Computer Vision, Data Modelling, Relational Databases, NoSQL Databases, Data Management
- **Data Science tools and libraries**: Numpy, Pandas, Scikit-learn, Matplotlib, Seaborn, Tensorflow, Keras, Plotly, Pytorch, Scipy, Xgboost, Jupyter, Tableau, Microsoft PowerBI
- **Data visualization and Database tools**: MySQL, Firebase, MongoDB, DynamoDB, Hadoop MapReduce, Apache Spark, Resilient Distributed Dataframes, HDFS, XML,

PROFESSIONAL EXPERIENCE

Computer Vision Intern, Dimensionless Technologies Pvt Ltd **Dec 2021-May 2022**

- Trained an EfficientNet-B5 classification model to distinguish between original and counterfeit electronic products in the package, achieving an overall accuracy of 97%.
- Developed SolarAI, a software to detect and track internal and external solar panel defects with YoloV4 object detection model and a machine learning algorithm, improving the precision from 60% to 84%.

Research Intern – Deep Learning and Analytics, Skinzy Software Solutions Pvt Ltd **Oct 2020-Jan 2021**

- Built an instance segmentation Mask-RCNN model to predict and highlight skin abnormalities.
- Constructed a Convolution Neural Network and Resnet-50 Model in TensorFlow to detect skin abnormalities.

PROJECTS

DSCI 551 Project: HappinessQ | Python, MySQL, Firebase, Hadoop Mapreduce, Flask, Javascript

- Developed an Emulated File Distribution System to store file data and its metadata in the system and world happiness, unemployment and GDP using two database systems: MySQL and Firebase.
- Implemented command line tools such as put, rm, getPartitionLocation, readPartition, etc using Python and Javascript.
- Performed partition based Mapreduce to search and analyze the data stored in the file data and visualized it using a Flask-created web application.

Final Year Project Medi Locker | Named Entity Recognition, spaCy, MongoDB, Natural LanguageProcessing

- Created an application providing three services: Voice Prescription, Clinical SOAP note summarization, and Database Storage to devise a digital medical record infrastructure.

EEG Brainwave Emotion Detection using Stacked Ensembling *(Project Team Leader)* | Deep Neural Networks, Principal Component Analysis, Machine Learning

- Led a team to program a stacked model to forecast an emotion by combining outputs of eight base models such as deep neural networks, random forest with a 97% accuracy.
- Authored and presented a paper at the international conference, the 12th International Conference on Computing, Communication and Networking Technologies, in July 2021. **DOI: 10.1109/ICCCNT51525.2021.9579818.**

Pneumonia Detection from Chest X-ray using Transfer Learning | Transfer Learning, Data Augmentation, Convolution Networks, and Image Processing

- Conducted a comparison-based study of 3 transfer learning models VGG16, ResNet50 and Inception V3 and trained it to predict Pneumonia with a recall of 0.9897 and an accuracy of 0.9407.
- Authored and presented a paper at the international conference, the IEEE 6th International Conference for Convergence in Technology in March-April 2021. **DOI: 10.1109/I2CT51068.2021.9417872.**

Game Industry Sales Analysis *(Project Team Leader)* | Seaborn, Pandas, Numpy, Plotly, Matplotlib

- Performed a detailed univariate, bivariate and multivariate analysis and visualization to find trends such as top publishers, critics and user rating relation with console, sales graph, most popular console and categories using Python.

ACTIVITIES

- Secured rank 6 out 582 at the Business Data Analytics competition Anumaan, IIT Delhi in 2021 for analyzing key trends in sales data for 6 markets of an e-commerce company.
- Completed Certification in 2019-2020: DeepLearning.ai offered by Coursera, Applied Machine Learning by University of Michigan, Introduction to Finance and Management offered by S.P Jain Institute of Management and Research.
- Organized and managed events such as Competitive coding workshops, National Business Championship, Women's Week as a Head of Events for IEEE SPIT Bombay Section in 2019-2020.
- Volunteered at the Abhyudaya SPJIMR for 2018-2020, teaching underprivileged students Science and Mathematics