VIRAJ MEHTA

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EDUCATION

University of Southern California, Los Angeles, CA **May 2023**
Master of Science in Computer Science (GPA 4.00/4.00)
Coursework : Analysis of Algorithms, Data Mining, Applied Natural Language Processing, Database Systems.

D. J. Sanghvi College of Engineering, University of Mumbai, India **May 2018**
Bachelor of Engineering in Information Technology (GPA 9.18/10.00)
Coursework: Operating Systems, Web Technologies, Distributed Systems, Intelligent Systems, Software Engineering.

TECHNICAL SKILLS

- Programming Languages: Python, Java, HTML5, CSS3, Bootstrap, JavaScript, PHP.
- Frameworks & Libraries: REST, Flask, NumPy, Pandas, TensorFlow, Keras, Scikit Learn, PyTorch, Matplotlib.
- Database Technologies: MySQL, PostgreSQL, Redis NoSQL Key-Value store.

PROFESSIONAL EXPERIENCE

J.P. Morgan Chase & Co. **July 2018–July 2021**
Associate Software Engineer – Fixed Income Credit Tech | *Python OOP, Java, SQL, Linux CLI, Git, Agile.*

- Designed a resilient and scalable trade processing architecture for C2C trading employing transactional client-server protocols, multi-processing increasing Credit business' liquidity by 20%.
- Automated client allocations processing eliminating 90 minutes' average daily effort for Sales Assistants.
- Delivered Hedging capabilities for multiple US corporate bonds with USTs eliminating possibility of accumulated corporate risk and reducing manual effort of trading assistants' team by an average of 2 hours.
- Automated Portfolio Trading across different e-trading platforms and reduced trade execution time by 90%.
- Mentored new graduate hires in Mumbai, London, New York and Buenos Aires virtually as development lead of the team.

PROJECTS

Stock Analysis and News Aggregator | *Python, Flask, JavaScript, REST, AWS.* **February 2022**

- Deployed stock data summarizer for over 500 firms from FinnHub Stock API, displaying stock recommendations and latest news.
- Constructed Time Series analysis displaying closing price and volume drilled down over time intervals using HighCharts API.

Multi Texture Generation Using Neural Style Transfer | *Python, PyTorch, Matplotlib.* **October 2020**

- Developed a Deep Learning system to generate novel artistic textures on images utilizing Artistic Neural Style Transfer.
- Applied single or multiple texture masks with variable weights to generate textured images.
- Used PyTorch with CUDA and the VGG-19 CNN with L-BFGS optimization with a combined style and content loss of 11%.

Juxtaposing Deep Learning Architectures for Breast Cancer Classification | *Python, Keras, Seaborn.* **May 2020**

- Formulated a comparative analysis of the Inception v3 and the NASNet deep learning models on the 'BreakHis' breast cancer public image dataset by using Transfer Learning for training the models.
- Obtained an accuracy of 86% and 81% and an F1-score of 0.78 and 0.74 for the NASNet and Inception v3 model respectively.

Crop Disease Predictor | *Python, Scikit Learn, NumPy, Pandas, Bootstrap, Flask.* **April 2018**

- Developed a language localized web portal to predict possible diseases a crop can procure given a set of weather, soil and rainfall conditions and advise on potential preventive measures to be taken.
- Utilized ensemble Machine Learning models for prediction and achieved an average accuracy of 95%.

Monument Recognition Using Deep Neural Networks | *Python, TensorFlow, TensorBoard, Selenium.* **December 2017**

- Employed the Inception v3 Network and Transfer Learning to classify images of 12 monuments across the Indian golden quadrilateral. Obtained training accuracy of 99.4% with a test accuracy of approximately 98%.
- Curated the dataset roughly comprising 4000 images for training by performing data scraping and data cleaning.

Skill Improvement Portal for Teachers | *Bootstrap, YouTube API, JavaScript.* **July 2017**

- Accomplished as the winning project of JP Morgan's renowned India Code for Good challenge.
- Created a web application implementing Bootstrap to help the CEQUE NGO publish open-source video lessons to upgrade skillsets for teachers in rural regions of India.
- Applied YouTube API facilitating open-source videos and I18n via JavaScript to ensure availability of local Indian languages.

LEADERSHIP AND ACHIEVEMENTS

- Core team - AWS DeepRacer Mumbai. Organized virtual racing leagues with over 400 participants and 85 teams in 2020.
- Co-founder and Secretary - DJ init.ai club. Mentored junior batches of Computer Science in AI and its sub-domains in 2018.
- Winner – Led a team of 6 at JP Morgan's ML Mayhem contest organized by the Mumbai Machine Learning community in 2019.