Chaitali Joshi

cpjoshi202@gmail.com | +1 (201) 936 7618
https://www.linkedin.com/in/chaitali-joshi-b25499169/
Jersey City, NJ, USA

EDUCATION

New York University, *New York City, NY* *Aug 2022-May 2024*

- **Master of Science in Data Science**: *Introduction to Data Science, Probability & Statistics, Optimization & Computational Linear Algebra*

Veermata Jijabai Technological Institute (VJTI), *Mumbai, India* *Aug 2017-May 2021*

- **Bachelor of Technology in Electrical Engineering**; Projects in **Machine Learnin**g and **Deep Learning**
  GPA: 8.47 / 10

WORK EXPERIENCE

Business Analyst, Axis Bank, *Mumbai, India* *Aug 2021-Jul 2022*

- **Created** and **maintained** the ETB Personal Loan XSell **Dashboard** on **SAS Viya** on a monthly basis **by performing data analysis** using **SAS** and **SQL** to **present key metrics** pertaining to business overview, conversion rates, base synthesis and risk of the ETB Personal Loan business to various business stakeholders
- Prepared the Retail Asset without Saving Account Pre Qualified customer database for Personal Loan by extracting,merging and filtering data from source tables on a monthly basis
- **Performed deep-dive analysis** of the ETB Personal Loan business risk **using SAS and SQL to identify the segments** that were driving the trends observed in the early risk data by **analyzing the risk split across different customer segments** and presented the findings to stakeholders

Research Assistant, Center of Excellence (CoE-CNDS), VJTI, *Mumbai, India* *Dec 2018-May 2021*

- **Developed an Autoencoder(AE) based semi-supervised learning model** in **Python**, to **detect fraud** and **anomalies** in credit card transaction data, that was **shown to have a lower RMSE as compared to traditional Machine Learning algorithms**.
- **Deployed LGBM model,** using **Python to forecast load demand** given various weather parameters as features; **performed feature engineering** to **create new features from existing features.**

Technology Consultant Trainee, PwC India,*Mumbai, India* *May 2020-Jul 2020*

- **Forecasted** the **sales** of various items at stores **using Machine Learning** and **Analytics capabilities** and **AI-guided tools** for **data analysis**, **visualization**, feature **engineering** and **model training within SAP Analytics cloud.**

PROJECTS

Audio and Video Deepfake Detection | *Python, Keras,Tensorflow,ML,DL,Nvidia DGX-1* *Aug 2020-May 2021*

- **Designed two systems** to accurately **differentiate** between **real** and **fake audio** and **video on Nvidia DGX-1**.
- **Implemented two methods** for detecting fake audio: **a feature-based approach utilizing ML algor**ithms and a**n image-based approach employing DL algorithms, notably TCN, which gave a test accuracy of 92%.**
- **Applied Transfer Learning technique to extract features** from video data and **implemented LSTM and TCN models** to detect fake video.

Publication **-** A Deep Learning Framework for Audio Deepfake Detection, Springer Journal

DeepWind: Wind speed forecasting | *Python, Keras, Feature Engineering,ML* *Jan 2020-April 2020*

- Obtained wind speed forecasts for Indian weather stations **using ensemble learning on ML algorithms**: the **LGBM** and **LSTM networks**,**employed Miss Forest, used unique feature representation** to emphasize recent data and FFT with **Digital Filters to remove outliers in the data.**
- **Presented the project to a panel of 5 industry experts,** at the "CDAC - NVIDIA AI Hackathon", **ranked top 10 across India among 350+ teams.**

Publication **-** A Short-term Wind Forecasting Framework using Ensemble Learning for Indian Weather Stations, IEEE INOCON

Explainable AI Project |Python, *Tensorflow, Keras, Explainable AI* *Oct 2019-Dec 2019*

- **Employed Explainable AI techniques like LIME & LRP** to **interpret AE** trained on a gas pipeline system to identify attack scenarios.

Publication **-** Interpreting a Black-Box Model used for SCADA Attack detection in Gas Pipelines Control System, IEEE INDICON.

Anomaly Detection in Gas Pipeline Systems | *Python, Tensorflow, ML, DL* *Jun 2019-Aug 2019*

- **Built an autoencoder network as a DL approach to anomaly-based** Intrusion Detection Systems to **detect attacks** in SCADA data that is used to control gas pipeline systems that o**utperformed traditional ML algorithms.**

Publication **-** A Semi-Supervised Approach for Detection of SCADA Attacks in Gas Pipeline Control Systems," IEEE-HYDCON

SKILLS

Languages: Python, C++, SQL, SAS ***Others***: Machine Learning, Deep Learning, Computer Vision, Nvidia-DGX
Frameworks/Libraries: Keras, Pandas, Scikit-Learn, Matplotlib, Numpy, Tensorflow, Excel, MS Office, SAS Viya