### GOVIND R. PANDE

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#### **SKILLS**

Programming Languages: Python, SQL, R, HTML/CSS, UNIX

Libraries: Scikit-Learn, pandas, numpy, matplotlib, seaborn, scikit-image, NLTK, streamlit, ggplot2, plotly, keras, tensorflow Tools: Excel, Git, Flask, PySpark, Hadoop, MongoDB, MYSQL, Docker, Tableau, Django, Flask, Weka, Tableau, PowerBI Data Science: ETL, Data cleaning, Data visualization, Data mining, Regression, Classification, Machine Learning, Deep Learning, NLP

#### **EDUCATION**

MS Data Science Sep 2021 – May 2023

New York Institute of Technology, New York, USA

**BE Civil Engineering** 

University of Pune, Pune, India.

Jun 2015 - Jul 2019

#### **EXPERIENCE**

# Director

AEROBLOX Pvt Ltd Jun 2018 - May 2021

- Developed new product that is 30% cheaper to produce with better crack resistance than conventional AAC blocks.
- Increased the structural strength of the product by adding PP fibers to reinforce microstructures inside the blocks.
- Developed a lucrative product by identifying opportunities in gypsum and asbestos ceiling corniches market offering a safer alternative
- Directed technological improvements, reducing waste and business bottlenecks.

#### **PROJECTS**

# Mathematical Modeling and testing using MATLAB

May 2019

- Used MATLAB to model 1D and 2D structures with single and double Tuned Mass Dampers with different mass ratios.
- Analyzed the effective reduction in maximum deflection by plotting displacement histograms for 4 previously recorded earthquakes.
- Determined the best mass ratio and damping coefficient for different types of buildings.

# **Airline Ticket Price Optimization**

**Dec 2021** 

- Built a pricing function for airline tickets using the Dynamic Programming framework.
- Achieved a 24% and 19% increase when compared to linear pricing function and adaptive pricing function respectively.

# Stock Trading Application Database Design

May 2022

- Designed and created tables, attributes, and relationships using MySQL Workbench.
- Created fake business data to test the requirements and constraints.
- Denormalized the database to improve response time by 20%.

# **Song Recommendation System**

May 2022

- Developed a web application to perform analytics on songs, artists, and albums on the Spotify platform using Streamlit.
- The recommendation engine will give recommend 10 songs which corelate the most with your selected song.
- Integrated the K Means Clustering algorithm and visualization for in the web application enabling users to import their playlist from Spotify and run analytics on it.

## Portfolio Allocation using Reinforcement Learning

Nov 2022

- Performed EDA and ETL operations for large financial dataset using python.
- Developed reinforcement learning models like A2C, PPO, DDPG, SAC and TD3, training them on stock data from year 2008 to 2020.
- Trend-following technical indicators like MACD and RSI among other indicators were used to achieve 29% annual return when tested for the year 2020 - 2021.

## Chronic Kidney Disease Classification using Machine Learning

Nov 2022

- Developed and deployed 5 machine learning algorithms (Naïve Bayes, SVM, KNN, ANN and Decision Tree) on medical dataset from research conducted in Apollo Hospital in India.
- Using blood test data like blood urea, serum creatinine, hypertension and diabetes mellitus, the presence of chronic kidney diseases was classified with a maximum accuracy of 95%.