

ARIF SARFARAZ WAGHBAKRIWALA

BOSTON MA – 02120 | 617-417-3729

waghabakriwala.a@northeastern.edu • [LinkedIn](#) • [GitHub](#)

EDUCATION

Northeastern University, Boston, MA, USA - **Khoury College of Computer Science**

Sep 2021 – Present

Master of Science in Data Science (GPA: 3.7)

Courses: Intro to Linear Algebra, Statistics & Probability for DS, Algorithms, Intro to Data Management and Processing, Supervised Machine Learning, Data Mining and Unsupervised Machine Learning.

Gujarat Technological University, GUJ, IND - Pacific School of Engineering

Aug 2016 – Aug 2020

Bachelor's in Engineering in Computer Engineering (CGPA: 8.77)

Courses: Vector Calculus & Linear Algebra, Numerical & Statistical Methods, Differentials (AEM), Data Structures, DBMS, Algorithms, Data Mining & Business Intelligence, Artificial Intelligence.

SKILLS

Programming Languages	R, Python, SQL, Java, C, C++, Scala, Spark
Database	MySQL Database, WDI, SQLite, Quandl
Data Tidying	tidyverse, tidyr, pickle, dplyr, tokenization, tidytext
Data Analysis	ggplot2, readr, modelr, stats, scales, broom, RSQLite, Matplotlib, Seaborn
Data Manipulation	Pandas, Numpy, Scikit-learn, NLTK, pyTorch, topicmodels, Tensorflow, MLPack
Machine Learning	Logistic, Ridge and Lasso Regression, Regularization, Gradient Descent, Multivariate LDA, kNN, A-Priori, PCY, SON, Toivonen's, XGBoost, NLP
Technologies	Microsoft excel and PowerPoint, WordPress, cloud computing (google)

PROJECTS

Product Sales Analysis, Electronic Appliances Sales Data – Exploratory Data Analysis

Dec 2021 – Jan 2022

- Process a mammoth dataset of 180k+ records to extract hidden patterns, to increase business sales and trade value.
- Executed Data Wrangling & Feature Engineering, followed by deriving frequent itemsets & best-selling products.
- Post extrapolation- filtered out electronic devices to recommend, which on average could surge profits by 26%.

Feature Analysis, The Movies Dataset & IMDB Movies – Supervised Machine Learning

Nov 2021 – Dec 2021

- Leveraging movies datasets to ascertain success rate of movies, actuating decision of investment in certain Genre.
- Validated custom procedures focused on Data Tidying, Typecasting, One-hot Encoding & Standardizing features.
- Altered Random Forest achieving an improved accuracy of 94.3%, higher than the baseline decision tree models.

Neural Style Transfer, Coursera – Deep Learning

Nov 2021 – Nov 2021

- An endeavor of style imposition of one artistic image onto a neutral image, utilizing PyTorch Module in Python.
- Applied pre-trained CNN model VGG-19, built content & style loss function & Normalized Images to Tensor.
- After training for 3K+ epochs, attained 34% decrease in loss function with MSE of 0.18 from 0.27 of initial epoch

Life Expectancy Prediction, Gap-minder Dataset – Supervised Machine Learning

Nov 2021 – Nov 2021

- Forecast life expectancy by constructing a Linear Regression Model on independent attributes of primary Dataset.
- Feature Engineered 5 Candidate Variables & selected 3 among them as Predictors for training **Regression Model**.
- After feature modifications, accomplished an **RMSE** of **0.0095**, 20% less, indicating increased accuracy of model.

Economic Data, Time Series Visualization – Trends of GDP

Oct 2021 – Oct 2021

- Retrieve & envision demographic data of 'World Development Indicator' dataset in WDI Package, 'R' language.
- Extracted & Plotted time series graphs of GDP for certain countries for last 6 decades & contrasted the results.
- Inferred peaks & correlations of the variables resulting in surmise of presumptions of "**The Great Recession**".

EXTRA-CURRICULARS

- Techfest IIT, Bombay: *Open Data Science W/S, Machine Learning, Artificial Intelligence and Deep Learning.*
- Space Technology and Aeronautical Rocketry: *Code War, National Level Techfest, Participant (Python).*
- ISTE: *Real Life Application of Mathematics in Science and Technology Workshop, National level Science Event.*
- Student Volunteer, Techfest Event: *Appointed as Student Volunteer, managing Science and Technological Events.*
- Student Coordinator, Sports Event: *Assigned duties of a Student Coordinator, organizing College Athletic events.*