**SHANMUKHA SARAT PONUGUPATI**

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# EDUCATION

**Northeastern University, Boston, MA Sept 2021-May 2023**

Master of Science in Data Analytics Engineering ***GPA – 3.68***

Relevant Courses: Algorithms, Machine Learning, Machine Learning In Finance, Data Management & Database Design, Computation &Visualization, Data Mining in Engineering, Operations Research, Financial management

# GVP College of Engineering, Visakhapatnam, India Aug 2015 -Aug 2019

Bachelor of Technology in Computer Science Engineering

Relevant Courses: Machine Learning, Operating Systems, Probability and Statistics, Design and Analysis of Algorithms, Object Oriented Programming

# TECHNICAL SKILLS

**Programming Skills:** Python, SQL programming, R, Java, JavaScript, C/C++, SAS, H2O, Linux, Perl, Software Programming

**Big Data**: ETL, MATLAB, Hadoop, Spark, Apache Hive, Databricks, Synapse, Datadog, Splunk, Airflow and Spark

**Libraries:** NumPy, Seaborn, Pandas, Matplotlib, ggplot2, tidy verse, Sklearn, TensorFlow, PYTorch.

**Tools:** Tableau, Power Bi, Spacy, AWS, Git, NLT Toolkit, GCP, Microsoft azure, Microsoft excel, Redis, Microsoft PowerPoint, MS office, docker

**Database:** MYSQL, MongoDB, LookML, dbt, SQL

**Machine Learning:** Data Preprocessing, Data Wrangling, Supervised Learning, Unsupervised Learning, Reinforcement learning, Transfer Learning, Deep Learning, Natural Language Processing, Algorithms, Decision Trees, clustering, linear Regression, classification, sentiment analysis, SVM, GBM, mapping, Data Mining**,** Data Analysis, Data Visualization, , Statistical techniques, Quantitative analysis, Business Insights, Product management, Problem solving, Kafka, data modeling, Seldon, Mathematics, Statistical techniques, data warehousing, Data quality, Analytical, data reporting

**Professional Certiﬁcations:** TensorFlow developer by Google, Deep Learning specialization (Coursera)

**Other Skills:** Sourcing, self-motivated, curious, attention to detail, written and verbal communication skills, team oriented, Versatile.

# PROFESSIONAL EXPERIENCE

**Data Science Intern, Alma better Dec 2020-Apr 2021**

* Carried out performance evaluation employing Accuracy, RMSE, MAE and ROC to measure accuracy of models. And an accuracy of 85% is achieved on the validation.
* Created various ML models capable of detecting emotion through speech validated them, and back tested them.
* Implemented end to end using Flask API and deployed on AWS.
* Trained Deep Learning Models using Transfer learning in Python with help of TensorFlow.
* Performed analysis on audio clips using Mel Spectrogram, MFCC and Image analysis on the spectrogram of the audio clips using image processing techniques to make data- driven decisions.
* Remodeled using Data Augmentation methods and over sampling to create a robust model.
* Reduced hate-speech in virtual meetings by 87%. Learning systems at scale

# PROJECTS

**Customer Revenue Prediction, Northeastern University Feb 2022**

* Performed a Time Series and Geographic analysis on the data to gain insights and find patterns in the data.
* Used libraries like sklearn, seaborn in Python to Analyze a Google Merchandise Store (G Store) customer dataset as a part of [Kaggle](https://www.kaggle.com/sharathshanmukh) competition to predict revenue per customer after listening to clients requirements.
* Trained models like Random Forest, XGBoost, KNN, Light GBM. After ﬁne tuning of hyperparameters, a consistent RMSE score of 1.71 has been achieved.
* Strengthened marketing ROI significantly by targeting audience using 80-20 rule and offered other financial services.

# Sales Insight Dashboard, Tableau Jan 2022

* Created an interactive Tableau [Dashboard](https://public.tableau.com/app/proï¬le/shanmukha.sarat.ponugupati) to get insights into the revenue and Sales.
* Implemented a live connection to MySQL database.
* Generated charts like top n products, top n consumers ﬁltered by year, Region.
* Discovered various patterns using data driven approaches in the shopping style of the customers that initiated a profitable target marketing.

# Database Design for Credit Card Application, Northeastern University Dec 2021

* Created a Credit card Application management database by formulating business rules and designing ERD
* Constructed relational databases consisting of 80 entities deploying DDL statements in SQL.
* Implemented concepts of triggers, table level constraints and stored procedures to enhance efficiency of the database.
* Delivered a top-quality Database system with minimal response time and a consistent cache-hit ratio of 99.54%.