# AMRITHA SUBBURAYAN

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A passionate and aspiring Data Science Graduate, skilled in statistics, analytics, predictive modeling, and data mining. Seeking an opportunity in the field of data science, where I can utilize my technical expertise to deliver valuable insights and improve my inherent skills.

## *EDUCATION*

**University at Buffalo, The State University of New York,** NY, USA — August *2021 - Present*

Master of Science in Data Science (STEM Designated)

Related coursework: Linear Algebra, Probability Theory, Statistical Data Mining, Programming and Database fundamentals (Python and SQL), Data models & Query Language, Machine Learning, Computer Vision and Image Processing.

**Anna University**, Chennai, India — *April 2019*

Bachelor of Technology in Information Technology

## *TECHNICAL SKILLS*

**Programming Language:** Python, SQL, Java, Shell Scripting | **Analytics**: Tableau, Power BI, R, MATLAB, MS Excel, ETL, Jupyter | **Web Technologies**: HTML, CSS3, JavaScript, PHP **| Tools**: RStudio, Jenkins, Android Studio, AWS, NICE Actimize, Visual Studio, GIT, ServiceNow| **Database**: Oracle, MySQL, PostgreSQL, SQLite | **Libraries/Frameworks**: Pandas, Numpy, Scikit-Learn, SciPy, TensorFlow, Keras, Matplotlib, GGplot2, Plotly, BeautifulSoup, Selenium, ReactJS, AngularJS, Spring, Hibernate, D3.js

## *PROFESSIONAL EXPERIENCE*

**Software Engineer | Larsen and Toubro Infotech,** Chennai**,** India — *May 2019 to July 2021*

- Enhanced the case management workflow processes by building various use case designs with Python and Actimize framework for the CITI Bank's Anti-Money Laundering solutions to identify and prevent suspicious activities.
- Developed a supervised model using python to identify the high-risk tickets which helped analysts to pay more attention to the cases generated based on specific alerts with an accuracy of about 82%.
- Created scheduler jobs for Actimize visual modeler and Autosys file watcher using Shell Scripting to reduce dependency with middleware and Production Assurance team.
- Played a key role in setting up a cloud-based environment to migrate all our existing applications to AWS cloud that reduced the operation cost of handling the multiple internal servers by 35%.
- Cleansed, transformed, and analyzed unstructured AML (Anti-Money Laundering) data and created an interactive dashboard using Tableau to visualize the hidden fraudulent cases that helped analysts to take preventive measures earlier.

## *ACADEMIC PROJECTS*

**State University of New York at Buffalo, USA**

**Crypto-Currency Price Prediction and Analysis using ARIMA Model | R** — *September 2021*

- Performed exploratory data analysis to identify the well-performing digital currency among the retrieved 6 cryptocurrencies dataset with features such as the volume of transactions, closing price, highest bid values over a period.
- Developed a Time Series forecasting model for the analyzed cryptocurrency dataset to forecast the prices of the 6 cryptocurrencies for the next two years. AIC and BIC values were used to determine the accuracy of the model.
- Created dynamic visualizations which allow users to visualize the price movements of various cryptocurrencies using the D3.js framework.

**H-1B VISA APPROVAL PREDICTION: An intuitive model to understand the visa statistics over the years | Python** — *September 2021*

- Designed a database schema and created python scripts to transform and store 4.2 million data efficiently into the database using SQLite.
- Studied and analyzed the trends in factors influencing the H1-B Visa approval by using various graphical techniques on collected data.
- Implemented following classification models - Decision Tree, Random Forest, Naïve Bayes, K-NN and Artificial Neural Network to classify the visa approvals and optimized the models by Hyperparameter Tuning to improve the efficacy of the models.

**Customer Segmentation Analysis and Response Prediction | Python** — *November 2021*

- Developed an unsupervised model using K-Means Algorithm to segment the customers based on their attitude towards the products and through statistical analysis.
- Developed a supervised ensemble model using gradient boosting algorithm to predict whether the customer will accept the offer in order to help companies promote the offer campaign to targeted customers.
- Created a dashboard using Tableau that helps the employers to visualize the list of the products which the customers might repurchase in the future.

**Anna University, Chennai, India**

**Android Mobile Application | Java** — *March 2018*

- Developed an android mobile application that creates quizzes from a pool of questions and generates interactive flashcards to improve vocabulary skills.
- Tech stack - Android Studio, SQLite, PHP, and REST API.

## *CERTIFICATIONS*

- Brain Bench certified in Java 8.
- Statistics for Data Science and Business Analysis – Udemy
- Machine Learning A-Z™: Hands-On Python & R In Data Science - Udemy