

Prasanna Rodrigues

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EDUCATION

Master of Science in Applied Statistics
Rochester Institute of Technology

Rochester, NY | 12/2023

Master of Science in Mathematics
University of Mumbai

Mumbai, India | 06/2019

SKILLS

- **Core concepts:** Statistician, Time Series Analysis, Predictive Modeling, Bayesian statistics, Machine learning, Data Mining.
- **Languages and Tools:** Excel, R, R Shiny, SAS, Python, Minitab, JMP, SQL, Power BI, Tableau, Mathematica.

WORK EXPERIENCE

ROCHESTER INSTITUTE OF TECHNOLOGY | Research Assistant

Rochester, NY | 01/2023 – Present

- Utilizing **ML** techniques like **decision trees and random forests** to classify uncertainty in future coastal damages and adaptation costs from **mean sea-level rise as high-end/ non-high end using Python**.
- Performing **hyper-parameter tuning, cross validation, and feature importance** to increase the efficiency of the model. (Using **Pandas, NumPy, SciKit-Learn and Matplotlib libraries**).

BASSEIN CATHOLIC CO-OPERATIVE BANK | Banking Data Analyst

Mumbai, India | 09/2019 – 11/2021

- **Collaborated** with internal teams and customers to identify and define data conversion requirements. **Performed** modification and rectification on the data before data migration that ensured the **accuracy of migrated data to 70%**.
- **Implemented** data filtration and aggregation on the accounts to identify duplicated accounts and created linkage between savings and business accounts which **reduced reduplication by 80%**.
- **Executed** data filtration on the bank accounts and analyzed the inactive accounts to identify the current active accounts and **notified clients about their finances that brought down the number of inactive accounts by 20%**.

PROJECTS

SAND BLASTING EXPERIMENT ANALYSIS

01/2022 - 05/2022

- Designed an experiment using **Design of experiment principles in JMP**, examined the adequacy of the model and established significant predictors by fitting a **two factorial screening design**.
- Redesigned the experiment with significant predictors by fitting a **definitive Screening design**. Investigated the efficiency of the model and reduced the model to optimize the process.

PREDICTIVE ANALYSIS OF TITANIC DATA SET

09/2022 - 12/2022

- Performed **data modification and filtration** on the **titanic data** set by converting the character variables to nominal and imputed the missing values using imputation packages in **R**. (used **Amelia and MissForest libraries**).
- Implemented machine learning models like **generalized linear model, random forest and C5.0** and performed parameter tuning and cross validation on the titanic data. (Used **Caret package**).
- Concluded the **generalized linear model (GLM)** to be the best model with **training accuracy of 82.15%** at the threshold of 0.562 and the resulting **test score of 77.75%**.

TIME SERIES FORECASTING OF NASDAQ-100 INDEX

09/2022 - 12/2022

- Gathered data from online websites for daily **NASDAQ-100 index, Covid-19, Unemployment rate and oil prices** and performed data pre-processing and merging using **Python**. (Using **Pandas, NumPy, and Matplotlib libraries**).
- Performed **visualization** on Data sets over time by combining them into a single graph to spot similar trends and seasonal behavior. (Used **Tableau**).
- Applied time series models like **regression, double exponential smoothing and ARIMA** to the data set, performed cross validation and concluded the regression model to be the best model with a **prediction accuracy of 84.62%**.

CERTIFICATION

- Completed a Data Science program with an A grade offered by HarvardX.
Courses: Inference and Modeling, Wrangling, Visualization, Linear Regression and Probability.
- Completed a **business skill for aspiring leaders** certificate program offered by Rochester Institute of Technology