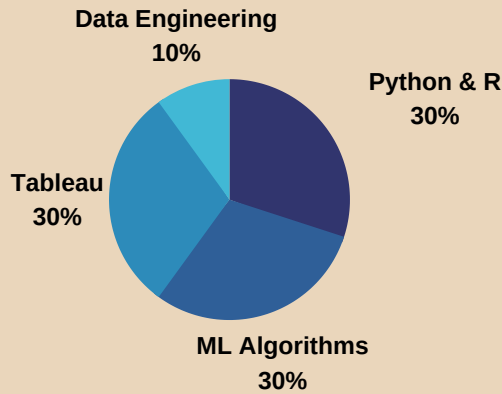# MAINAK RAY

MACHINE-LEARNING / DATA VISUALIZATION/ PREDICTIVE ANALYTICS

Andul Choudhuri Para ,Howrah-711302 West Bengal ,India
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Professional Summary:

- I have three years of working experience as a business data analyst.
- I have worked with various types of projects using Regression, classification-based prediction models, MPL, LSTM
- Comfortable with various supervised and unsupervised ML algorithms such as CHAID, logistic & multiple regression analysis, decision tree-based models Xgboost, AdaBoost, etc,
- Comfortable with R and Python programming languages.
- Comfortable with various deep learning frameworks (Keras, TensorFlow).
- Comfortable with BI software such as Tablue / Power Bi, SPSS.
- Comfortable with Databricks.
- Comfortable with SQL(MySQL) and NO-SQL (PYMONGO) databases.
- Comfortable with Project management software (P6 EPPM, MSP).
- Working knowledge of NLP and RPA.

Areas of Expertise

Data Engineering 10%
Python & R 30%
Tableau 30%
ML Algorithms 30%

Certification

- **"Introducing Robotic Process Automation (RPA)" (Automation Anywhere).**

- **Artificial Intelligence Foundations: Neural Networks (NASBA).**

- **Building Deep Learning Applications with Keras 2.0(LinkedIn).**

- **Business Analytics (LinkedIn).erc**

Business /Domain Knowledge

- **Construction and Infrastructure Development.**

- **HR Procurement.**

- **Project Planning and Control**

Professional History

Buzzworks Business Services Pvt. Ltd (June 2021 - present).
Associate Consultant-ERM 1 (Enterprise Risk Management: Operations)
Client: Capgemini.IN | June 2021 - present

Data Analysis and Business insights :
- Preparing Dashboards using Tableau and Excel.
- Data Analysis using Excel (ex: exponential smoothing, VLookup, V-Look up, H-Look up, Sumif, Pivot, etc.)
- Preparing DECK and **SWOT Analysis, Predictive Analytics, and Change management.**

Automation:
- Prepare a **Python** tool that can Automate the data extraction from excel and generate bulk word documents for communications such as automated challan generation, and vendor communication daily basis, prepare daily reports, etc
  - Module use : PySimpleGUI,Pandas,DocxTemplate.
  -
- Prepare Macro Enable workbooks for daily Report generation.

Achievements :
- Prepared POC for "Asset Management and Control" to minimize the financial risk.
  -
- We prepared an end-to-end business flowchart of the "Contract Extension system "to ease AUTOMATION and hassle-free procedure.

Infinity PMC Solutions Pvt Ltd
Professional Service Consultant
Client: Rolls-Royce.Com | JAN 2021-Jun 2021 (Under Contract)

Data Analysis and Business insights :
- Preparing project management and control Dashboards in Excel.
- Data analysis (ex: Predictive analytics, PERT-CCPM) using MSP, Primavera P6, and PYTHON.
- Preparing Project schedule and risk modeling using PERT -CPM method.
- Preparing go-ahead plan implementing best practices to ensure the integrity of data and quality of output after the study of several reports, and drawings Contracts.

Achievements :
- Prepared POC for "Vendor Performance Scoring System" to complete the project within budget and schedule.
- Prepared EOT to work out a win-win strategy for Extension of time without penalty ..

NerdyTurtlez.com
Subject-matter expert (Machine Learn and AI)
Client: start ups | Jul 2020 - Oct 2020

Data Analysis and Business insights :
- Preparing project management and control Dashboards in Excel.
- Preparing B-PLAN for start-ups.
- writing technical blogs on machine learning and data science.
- Predictive analytics using WEKA, R, IBM SPSS, and Python.

Achievements :
- **Publish Python packages on PYPY.**
  - **binary-decision-parameter (https://pypi.org/project/bianary-decision-parameter/).**
    - The main focus of the project is to find out the best parameters of the decision tree to achieve the desired results for example recall, accuracy,f_score, and so on.

  - **TSmodel 0.2 (https://pypi.org/project/TSmodel/)**
    - The main focus of the project is to find out the best parameters of ARIMA based on the initial guess.

S. K Samanta & Co. (P) Ltd.(April2019-Jun 2020).
Gannon Dunkerley & Co., LTD. (OCT 2017 -JAN 2019).
Graduate Engineering Trainee

Data Analysis and Business insights :
- implementation of best practices to ensure the integrity of data and quality of output after the study of several reports, and drawings Contracts.
- Data analysis and risk modeling using MSP, Primavera P6, primavera Risk, and Excel.
- Assist in the calculation of Budget Preparation as well as material Estimation.
- ·Ensure that the vendor payment is released on time as per the agreement clause.

Reports :
- Ensure that the reports are submitted on time as when required by the Client and management.
- ·Maintain monthly and yearly progress reports and No Show reports.
- ·Maintain vendor performance report.
- ·Ensure that the vendor payment is released on time as per the agreement clause.

**Master of Science (Mathematics) (Pursuing)
(Online lovely professional university); 2022-2024.**

IBM Machine Learning Professional Certificate

- Supervised Machine Learning: Classification.
- Exploratory Data Analysis for Machine Learning.
- Supervised Machine Learning: Regression.
- Unsupervised Machine Learning: Clustering.
- Time series analysis and survival analysis.
- Artificial neural network and reinforcement learning

Bachelor of Technology (Maulana Abul Kalam Azad University of Technology); 2017.

Graduated with B.Tech in Civil Engineering with a special interest in Earthquake engineering, operation research, and FEA.

PROJECTS   https://github.com/mainak-cmd

**Factors Market Mix Modeling on Amazon Inventory Data.
(https://github.com/mainak-cmd/MMM/tree/main)**
- NLP Techniques are used to calculate the popularity factor as a numerical factor (0-1scale).
- Using this factor and price we can determine how much promotion a product needs.

Capgemini-Tech-challenge-2021
- The main focus of the project is to prepare a recommendations system for cloth and electronic goods.
- Recommendations system :
  - Collaborative system
- Algorithm use:
  - NearestNeighbors(algorithm='brute', metric='cosine')

House Prices - Advanced Regression Techniques (ML PROJECT)
- Feature selection using lasso, prediction using random forest with hyperparameter tuning.
- kaggle rank 5682
- RMSE score 0.25592

Factors Influencing strength of concrete -machine learning approach(ML PROJECT).
- For these projects, eight factors are considered Cement, Blast Furnace Slag, Fly Ash, Water, Superplasticizer, Coarse Aggregate, Fine Aggregate, and Age.
- Algorithm use:
  - Feature selection: LassoCV
  - Model creation: Polynomial regression
- RMSE OF TRAIN SET 0.003621894295925656.
- RMSE OF TEST SET 0.004775801136676444

Simple material estimator for residential buildings
- Preparing an Object-oriented program in python to estimate building materials and labor resources for simple residential buildings.