Rahul Das | Data Science & Machine Learning Professionals

I have 11+ years of industry experience including 7+ years in ML/Data Science, specially in the Banking/Retail domain. During my tenure, I was able to gain expertise in Machine Learning, Deep Learning, Image processing, Linear Algebra, and Statistics. Besides Python, I've used Javascript and Typescript to create dashboards and visualizations. Currently I am looking for opportunities to apply my expertise and learn further.

Relevant Experience

Current Date — **ML Engineer** | Data Scientist | EvdeVerve, Finacle

» AutoML Platform

Client - **Finacle**

Spearheaded the development of an AutoML platform featuring explainable models within the existing banking solution, specifically tailored to meet the needs of banking customers, thereby enhancing the efficiency and transparency of the system.

Roles & Responsibilities -

- Ensuring consistent data flow for various models.
- Ensuring the global and local explainability of the models.
- Ensuring seamless model integration during inference.
- Ensuring support for ONNX.
- Ensuring seamless interoperability and deployment of models across various environments.
- Ensuring project lifecycle monitoring using Data Drift + Concept Drift.

Tool - dask-ml, Optuna, scikit-learn, SHAP, LIME, sktime, statsmodels, ML-Forecast,

June 2023 — **ML Engineer** | Data Scientist | EvdeVerve, Finacle

» Synthetic Tabular Data Generator

Client - **Finacle**

Successfully developed a Synthetic Tabular Data Generator tailored for the banking domain. This project aimed to create statistically equivalent synthetic data while concealing sensitive financial details.

Tool - scikit-learn,

Mar 2023 — **Data Scientist & ML Engineer** | Assistant Consultant | TCS

» Item / Buddy Matching

Client - **Walgreens**

Manually organizing big class of merchandise for Retailers is a headache. The Retailers want to identify all comparable item/buddy under same clustering using image or textual information.

Roles & Responsibilities -

- Clustering using textual information --
- Given product titles, brand, manufacturer info and other quantifying their diploma of similarity using, Feature selection followed by clustering
- Feature Selection - I use PCA and SVD to undertake Feature Engineering that demonstrates the highest level of reliability.
- Feature Selection - Adding and removing one feature at a time while monitoring the decision tree's accuracy metric. Then selecting features with highest accuracy
- Finally clustering Feature vectors is done using Hierarchical clustering algo.
- Similarity measurement using image --

Tool - python3, Tendorflow, keras, matplot-lib, numpy, opencv,

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Relevant Skills

Python — 6 Years
core-library, type-hinting, Fast-ApI, Flask, asyncio,

Data Science — 5 Years
numpy, scikit-learn, Optuna, matplotlib, seaborn, opencv, Shap, Lime, dask-ml,

ML/DL Framework — 4 Years
tensorflow, Keras, pytorch,

SQL Database — 4 Years
postgres, Azure Databrics, Python/sqlite3, pyspark, pandas,

DS Fundamentals — 4 Years
Statistics, Linear Algebra,

My Leaning Stack

Given the present state of technology, I am developing certain skills, but I am not officially using them in my current company.

Rust, Mojo, C++, TypeScript,

Online Course

Coursera

Deep Learning Specilization

- Neural Networks and Deep Learning
- Structuring ML Projects
- Improving Deep Neural Networks
- Convolutional Neural Networks
- Sequence Models

» Product Identification / Object Detection

Client - **Walgreens**

Detect empty shelves in retail stores and refill empty shelves with the exact items specified in the planogram is a retailer's daily business. However, the task complexity increases exponentially with the number of merchandise items. Retailer wants a mobile app-based solution to support store owners. App will Organize missing shelves and replenish new value according to planogram compliance. As a deep learning engineer, my job was to detect empty positions of the shelvs from images captured by mobile apps, And Recognize the Product of filledup shelves.

Roles & Responsibilities -

- Image dataset collection by web scraping with Python script.
- Image dataset preprocessing, meta tag removal, resizing, image annotation.
- The main task of object recognition was taken over by YOLOV3. However, I did experimentation FRCNN.
- Training of state-of-the-art Yolov3 models [transfer learning].
- Monitoring the training process with Tensorboard and hyperparameter tuning.
- Deployed a trained model using Tensorflow-serving.

Tool - python3, Tendorflow, keras, Tensorboard, Tensorflow-serving, scikit-learn, matplot-lib, opencv,

» Associative Rule Mining

Client - **Walgreens**

Retailers want to find associations among large sets of particulars which are constantly brought together. In a sense this seems finding similarity between the particulars, but its not. Ex- Bread and Butter are frequently brought together. This association helps retailer to organize the Planogram accordingly, so the associated particulars can placed near by shelves. As a data scientist we had the job to find out that association.

Roles & Responsibilities -

- Data preprocessing - collecting daily invoice data from OLAP and mapping the items that are frequently brought together using Numpy Matric / Pivot Table
- I use Apriori Algorithm which is a Unsupervised Learning technique.
- That main difficulty with Apriori algorithm is it has time complexity of O(2^n). So we itroduced a technique to store the conditional probability generated by algorithem from original data set. We reuse the conditionally probabilities in case of incremental data. This results lower time consumption in case of incremental data.

Tool - python3, scikit-learn, matplot-lib, numpy,

Aug 2017

Back end Developer | System Engineer | TCS

» Core Banking Solution [CBS]

Client - **State Bank of India**

Execution of core banking system across all branches and speed up all finantial transactions, automation of EOD interests calculation and ofline reporting.

Roles & Responsibilities -

- Enhancements for interest calculation for loan products.
- Change request implementation for parameter change, customer level limit tree creation, NPA, Financial transaction.
- Offline and ad-hoc report generation.

Tool - Sql, COBOL, Unix,

Jul 2012

Academics

2010-2012 | M.tech | CGPA 9.1
Communication Engineering

2005-2009 | B.tech | CGPA 8.5
Electronics & Comm Engineering

Certification

3D Reconstruction from Image
Modern Javascript Bootcamp
Google Cloud

- Google Cloud Fundamentals
- Google Cloud Infrastructure
- Google Core Services
- Scaling and Automation
- Google Kubernetes Engine

Achievement

- Oct 2016 - Technical Excellence Award for successful automation of Agricultural Subvention Reporting