REESHABH ANAND
MTech (Industrial and Management Engineering)

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ACADEMIC DETAILS

YEAR	DEGREE	INSTITUTE	CPI/%
2021-2023	M.Tech.(Industrial & Management Engineering)	Indian Institute of Technology, Kanpur	8.6
2014-2018	B.Tech. (Civil Engineering)	Indian Institute of Technology (ISM), Dhanbad	8.12
2014	Class XII (CBSE)	Delhi Public School, Dhanbad	92.33 %
2012	Class X (CBSE)	Delhi Public School, Dhanbad	10

INTERNSHIP

Data Analyst Intern- Axtria   *(May'22 – July'22)*

ETL (Extract Transform Load) for Data Warehouse Layer:
- Created **DDL (Data Definition Language)** for different **Fact** and **Dimension** objects of Data Warehouse.
- Created **SP (Store Procedures)** for different type of objects such as **SCD1**, **SCD2**, **Incremental load** and **Full load** objects.
- Created different query for **DQ (Data Quality) Check.**
- Also performed **SIT (System Integrated Test)** for Staging layer.

WORK EXPERIENCE

Business Analyst - Tredence Analytics Solution Pvt Ltd   *(Aug'18-Jan'19)*

- Worked on **MS Excel to** maintain weekly, monthly and quarterly **dashboard** of client's business model at different levels.
- Provided **reporting, analysis** and insights about sales drivers and key revenue performance metrics to support corporate analytics.
- **Documented business process** and analysed procedures to align with changing business needs.
- **Analysed** key aspects of business to evaluate factors driving results and summarized into presentations.

ACADEMIC PROJECTS

Sentiment Analysis on IMDB Movie Review (Applied Machine Learning) ⬤   *(Mar'22 – Apr'22)*

- The IMDB dataset consists of **50,000 Movie reviews** that have been pre-labeled with "good" and "negative" sentiment class labels.
- Classified sentiment based on review text, performed pre-processing by **Stop-word removal**, **tokenization, Stemming**, **Lemmatization**
- Executed Feature Extraction Techniques – **Bag of Words, TF-IDF, Word2Vec.**
- Applied Models – **K-Nearest Neighbors**, **Naïve Bayes, Logistic Regression, Support Vector Machine, Random Forest**
- Used **Accuracy**, **Precision**, **Recall and F1-Score** as evaluation metrics for comparing models

An Analysis of Customer Satisfaction towards JIO Sim-Marketing (Marketing Research)   *(Aug'22-Dec'22)*

- Conducted a **Problem Identification Research** to analyze & identify salient features of Customer Satisfaction towards Network Provider.
- Formulated **Management Decision** & **Market Research problems**, **Research Questions** and **Hypotheses**
- Designed a Single cross-sectional descriptive research, dynamic survey form using Scaling techniques
- Collected **127 sample data (primary)** using online surveys, focus groups & personal interviews
- Carried out **Exploratory, Descriptive Research** in **SPSS** on the data (Convenience Random Sampling)
- Analyzed the data using statistical (parametric & non-parametric) tests (**One /Two Sample t-test, Chi squared test**) to verify hypotheses.

Designing bank form in HTML and storing in database (Computer Aided Decision Systems)   *(Jan'22 – Mar'22)*

- Designed a bank form in **HTML** and stored the data into **MariaDB** database
- The values filled by user were passed to **PHP script** and through PHP the data was stored into database of MariaDB
- Built **Entity Relationship diagram** and related schema to display and analyse database and represent relationships among various entities used

Optimal Portfolio Construction (Financial Engineering)   *(Feb'22 – April'22)*

- Collected data for **15,NIFTY 50** companies working in different sectors and analysed **time series characteristics** of both stock price and its returns .
- Selected 10 stocks for investment from 15 ,based on their **Expected Return**, **Std-Deviation** and **Correlation Matrix.**
- The **minimum variance set**, and **efficient Portfolio frontier** for the **Markowitz portfolio** was plotted using the **Excel Solver.**
- Final efficient portfolio was selected using the **Capital Allocation Line (CML),** that maximizes the **Sharpe Ratio** and using **One-Fund Theorem.**
- So our final portfolio **57.38 %** of our total resource invested in **equity** and **42.62 %** invested in a **risk free assets** which would give us an annual **expected return of 24.5 %** with as **risk() of 9.56 %** and **Sharpe Ratio of 0.13.**

SELF PROJECTS

REAL STATE PRICE PREDICTION PROJECT (Linear Regression) ◯

- Performed **EDA**, **Data Cleaning, Outlier Detection and Removal**, **Feature Engineering** and **Dimensionality Reduction.**
- Used **One-Hot Encoding** for columns having categorical/text values.
- Used Gridsearchcv for hyperparameter tunning and **K Fold Cross validation.**
- Used different regression model such as **Linear, Lasso, Decision Tree regression** with **Linear Regression** giving us **highest accuracy i.e., 81.84 %.**

Air Passenger Forecasting (Time Series Analysis) ◯

- Predicted Air Passengers travel for next 10 years analyzing previous month wise data from 1949 to 1960 using time series techniques
- Decomposed Time series into its component to analyze **Trend, Seasonality** and **noise**
- Checked Stationarity using **Rolling Statistics test** & **ADCF-test (Augmented Dickey-Fuller)** and **stationarised** time series by **Differencing(d)**
- Plotted **PACF (Partial Autocorrelation function)** and **ACF (Autocorrelation function)** to find optimal parameters **p, d, q**
- **AR, MA** and **ARIMA** time series models applied and **RSS** used as evaluation metric.

Image Classification (CNN) ◯

- Performed classification of small images on cifar10 dataset from TensorFlow Keras datasets.
- Loaded the dataset into train and test and converted the 2D array of classes into 1D.
- Normalized the images to a number from 0 to 1.
- Build a simple ANN for image classification with sparse categorical cross entropy as loss function and run 5 epochs.
- Accuracy at the end of 5 epochs is 49%.
- Build a CNN model and ran it for 15 epochs.
- Accuracy at the end of 5 epochs with CNN is 70% and at the end of 15 epochs is 83%.

Credit Card Fraud Detection ◯

- Dataset is highly imbalance contain 284,807 transactions with 35 features out of 492 are Fraud's
- Performed **Explanatory Data Analysis (EDA)**, **Data Preprocessing** and **Data visualization**, **Class imbalanced data** handled by **SMOTE** and used **Accuracy**, **Precision**, **Recall** and **F1-Score** as metrics to compare model.
- Applied **Logistic Regression**, **Random Forest** and **AdaBoost** with sampling Best Model are Random Forest.

COURSEWORK AND SKILLS

Academic Courses	**Data Mining**│ **Probability & Statistics**│ **Applied Machine Learning** │ **Financial Engineering**│ **Introduction to Computing** (Java)│ Market Research │ Operation Research │ **Computer Aided decision System |** Causal Inference in BA
Online Courses	Applied Data Science with Python(Applied Plotting, Charting & Data Representation in Python │ Introduction to Data Science in Python │ Applied Social Network Analysis in Python │Applied Text Mining in Python │Applied Machine Learning in Python)
Technical Skills	**Machine Learning** │ **Statistical Analysis** │ **Natural Language Processing** │ **Python** (NumPy, Pandas, Scikit-Learn, SciPy, Matplotlib, Seaborn, NLTK, Regex) │ **MS Excel** │ **SQL | JAVA |** Tableau │ HTML │ PHP
Soft Skills	Critical Thinking, Problem Solving, Teamwork, Effective Communication, Adaptability

POSITION OF RESPONSIBILITY

- **Branch Coordinator** of Civil Engineering department in CONCETO'16, IIT (ISM) Dhanbad.
- **Teaching Assistant** for the course Enterprise Integration with IT**,** IME Department, IIT Kanpur
  (Aug'22 - Present)

ACHIEVEMENT AND EXTRA CURRICULAR ACTIVITIES

- Awarded 5-star **Gold Badge in SQL** under specialized skills at **Hacker Rank.**
- **Secured AIR 606 in GATE 2021** in Civil Engineering branch and **AIR 76 in GATE 2021** IN Environmental Engineering branch
- Attended a **Workshop on 3D printing** titled "Product development and Entrepreneurship" by 3D EDU- Printing Technologies Pvt. Ltd.
- Attended **B-plan workshop**, organized by Genesis, E-cell ISM Dhanbad.