

EDUCATION

Degree/Certificate	Institute	CPI/%	Year
M. Tech (Department of Management Sciences)	Indian Institute of Technology, Kanpur	-	2026 -2028*
B. Tech (Agricultural Engineering)	Maharana Pratap University of Agriculture and Technology (MPUAT), Udaipur	8.03	2021-2025
Higher Secondary Education	PM SHRI Jawahar Navodaya Vidyalaya, Padmi, Mandla	90.8 %	2020
Secondary Education	PM SHRI Jawahar Navodaya Vidyalaya, Padmi, Mandla	79.2 %	2018

KEY PROJECTS

Big Mart Sales Prediction | Linear Regression | [\(GitHub Link\)](#) | (Self Project) - June 2026

- **Objective:** To build a predictive model and find out the sales of each product at a particular store.
- **Approach:** Analyzed a dataset of 8523 records with 12 features, detailing characteristics of individual products.
- Conducted comprehensive **EDA**, including data visualization and bivariate analysis.
- Imputed missing values using statistical methods and performed **VIF**-based feature selection.
- Treated outliers and engineered features to enhance model performance.
- Implemented **Linear Regression**, **Gradient Boosting Regressor**, **XGB Regressor**, **Lasso**, and **Ridge** models for prediction.
- **Result:** Best result shows the **Gradient Boosting Regressor** with 0.6 **R-square** and **RMSE** of 1038.2.

PM2.5 Forecasting (India) | Time Series Regression | EDA | [\(GitHub Link\)](#) | (Self Project) - June 2026

- **Objective:** To forecast hourly PM2.5 using a **RandomForest** model that outperforms a 24h **persistence baseline** (R^2 0.97, MAE 2.22 vs R^2 0.86, MAE 4.79).
- **Approach:** Forecasted hourly PM2.5 across 36,192 timestamps; engineered **calendar features** and 1h/24h lags, using a **time-ordered 80/20 split** to avoid data leakage.
- Built a **RandomForest regressor** and established a **persistence baseline** (t-24h); evaluated both on a held-out test window using R^2 , MAE, and RMSE with a side-by-side comparison.
- **Tools:** Python, **scikit-learn**, Pandas, NumPy, Plotly.
- **Result:** Model achieved $R^2 = 0.967$, MAE = 2.22, RMSE = 3.58, versus a Naive-24h baseline of $R^2 = 0.857$, MAE = 4.79, RMSE = 7.46 on the test set — clearly outperforming the baseline.

Customer Churn Prediction | Machine Learning | Classification | [\(GitHub Link\)](#) | (Self Project) - July 2026

- **Objective:** To develop a binary classification model to accurately predict which customer is likely to leave.
- **Approach:** 20 independent variables are used over 7043 observations.
- Data Preprocessing: Cleaned data, performed **One-Hot Encoding** and feature scaling.
- Analysis: Conducted **EDA**, including **Univariate and Bivariate Analysis** for getting insights.
- Models Used: Employed **Decision Tree Classifier** and **Random Forest Classifier**, optimized performance by handling imbalanced data using **SMOTE**, also performed **PCA**.
- **Toolset:** **Scikit-learn**, NumPy, Pandas, Matplotlib, Seaborn.
- **Result:** **Random Forest Classifier** with Over **SMOTE** gave balanced results: Recall = 0.96, Precision = 0.94, F1 Score = 0.95.

COURSEWORK AND SKILLS

Relevant Courses*	Probability & Statistics Data mining and Knowledge Discovery Introduction to Computing Operations Research for Management
Online Courses	Excel Automation using ChatGPT by Simplilearn. Data Analysis with Python by IBM Cognitive Class* Data Visualisation with Python by IBM Cognitive Class*
Skills	Python ML Libraries: NumPy , Pandas , Matplotlib , Scikit-learn , Seaborn EXCEL SQL Power BI *
Soft Skills	Team Management Leadership Decision Making Communication Skills Adaptability Teamwork

ACHIEVEMENTS

- Secured AIR 9 in GATE AG 2026, organized by IIT Guwahati.
- Secured AIR 117 in GATE AG 2025, organized by IIT Roorkee.
- Participated in Regional Hockey Meet in 2017 and 2019.
- Secured 93.6 percentile in ICAR UG Examination.