ASHWIN ASHOK KUMAR

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ACADEMIC QUALIFICATIONS

Year	Degree	Institute	Performance
2018- Present	M.Tech. (Industrial and Management Engineering)	Indian Institute of Technology, Kanpur	7.78*
2012-2016	B.Tech. (Mechanical Engineering)	College of Engineering, Trivandrum	7.66
2011-2012	Class XII (CBSE)	Gurukulam Public School, Thrissur	95%
2009-2010	Class X (CBSE)	Gurukulam Public School, Thrissur	93.1%

*UPTO 2nd SEMESTER

INTERNSHIP

Intern at IBSFINtech India Private Limited **(**May'19-July'19)

Hedging Simulation of Business Cash Flows Using PowerBI

- Simulation of various hedging scenarios and compare the scenario profit/loss with the actual profit/loss.
- Scenarios included 'Hedging at Day X from Invoice Date', 'Hedging Y% of Invoice Amount', 'No Hedging', 'Stop Loss' and 'Take Profit'.
- Scenario involving change in invoice date spot rate was also simulated as part of the project.

Dashboard Creation Using PowerBI

- The dashboard was created to draw key metrics and conclusions of invoices raised by vendors for a retail corporation using the actual data (anonymised).
- Visuals were based on Business Areas (or LOB's), Vendor Location, Bank handling the invoice and based on a timeframe (quarterly and yearly for this project).

ACADEMIC PROJECTS

Monthly Auto Sales in US – Time Series Analysis (Feb'19-April'19)

- Predicting monthly auto sales in US by fitting **ARIMA model** to the historical data and creating a basic forecast.
- Performed **Exploratory Data Analysis, Data Cleaning and Dickey Fuller Test**.
- Using ARIMA, different models were fitted starting with **First Non Seasonal (Random Walk) Model followed by First Seasonal Difference Model and Combination of above two models**.
- The best model was then selected based on AIC value and validated. It was found out that model prediction closely followed the actual data and was used to predict sales for next 24 months.

Credit Card Fraud Detection Using Hidden Markov Models (Feb'19-April'19)

- Predict whether a credit card transaction was fraudulent or not using **Hidden Markov Model**.
- Project involved identifying spending profile of card holder and **construct sequences** from training data.
- Model was then tested on test dataset by computing probabilities of transaction sequence and comparing them to a threshold value. Transaction was flagged as fraudulent if the difference in probability exceeds this threshold value.

Prediction of House Prices Using Advanced Regression Techniques (Sep'18-Nov'18)

- Performed **Data Cleaning**, Data Integration, Data Preprocessing and Exploratory Data Analysis.
- Predicted House Prices using Simple Regression and **Bagging methods** (Random Forest and XGBoost).
- Compared the accuracy of predicted house prices of different models.
- Results indicated that XGBoost method is most accurate with **accuracy level of 86%**.

POSITIONS OF RESPONSIBILITY

- Member of Organizing Committee for Dhwani, Cultural fest of College of Engineering Trivandrum (2015)

AWARDS & ACHIEVEMENTS

- Secured 95 percentile in Common Admission Test. (2015)
- Secured 3724 rank in GATE (Mechanical) (2018)

COURSEWORK AND SKILLS

Relevant Courses	Data Mining and Knowledge Discovery | Statistical Modelling for Business Analytics | Introduction to Stochastic Processes |Probability & Statistics | Introduction to Computing | Computer Aided Decision Systems | Advanced Decision Models | Operations Research for Management |
Technical Skills	Java | R | Borland C++ | MS Office (Excel, Word, PowerPoint) |