

ACADEMIC QUALIFICATIONS:			
Qualification	Institute	CPI /%	Year
M.Tech Industrial & Management Engineering	Indian Institute of Technology, Kanpur	9.75* CPI	2021 - Present
B.Tech Mechanical Engineering	National Institute of Technology, Kurukshetra	8.7 CPI	2016-2020
Higher Secondary Education CBSE	St. Mary's School, Sunder Nagar	95.6 %	2016
Secondary Education CBSE	St. Mary's School, Sunder Nagar	10.0 CPI	2014
WORK EXPERIENCE:			
Axtria Ingenious Insights (Internship)			May'22 – July'22
<ul style="list-style-type: none"> ➤ Amazon Webservices (AWS): <ul style="list-style-type: none"> ▪ Understood various AWS technologies which were part of the department's data engineering pipeline and their purpose. ▪ Understood the concepts of Extract, Transform & Load (ETL) and their implementation in Python. ➤ Data Warehouses (DWH) concepts: <ul style="list-style-type: none"> ▪ Studied the concepts of the Data warehouses: Architecture, Key characteristics, Benefits, Implications in industry. ▪ Understood the concept of Dimensions, Facts & their linkage, Schema & Types- Star, Snowflake & Fact Constellation. ▪ Gained familiarity with Data Marts & its types, Data Lakes & Business Intelligence Tools. ➤ Apache Hadoop & Hive: <ul style="list-style-type: none"> ▪ Understood various concepts related to Big Data and their relevance in the industry. ▪ Learnt about Hadoop Architecture: HDFS, YARN, MapReduce, Hadoop Common & Hive: Architecture & Working. ➤ SQL: <ul style="list-style-type: none"> ▪ Understood and wrote medium complexity SQL queries (Joins, Sub-Queries, etc.) through a hands-on project. 			
TATA AutoComp Systems Limited			Feb'21 - Jul'21
<ul style="list-style-type: none"> ➤ Worked in Central Purchase deptt. & was involved in activities related to purchasing & spending of company's business units. ➤ Performed overall spend analysis of Business Units (under TATA AutoComp) for a particular financial year. ➤ Performed Materials cost to Sales price analysis of top sales parts on the customer side. 			
KEY PROJECTS:			
Amazon Customers Data Analysis Applied Machine Learning Natural Language Processing			
Objective	➤ To analyse the reviews and feedback of customers buying the products from the Amazon website.		
Approach	<ul style="list-style-type: none"> ➤ Performed sentiment analysis of the customer's summary by checking the polarity values using TextBlob library. ➤ EDA: Generated word cloud of positive and negative sentiments of customers using RegEx & nltk library. ➤ Analysed the behaviour of customers, the ratings & the lengths of their reviews. ➤ Identified customers to recommend more products based on no. of products purchased & their average ratings. 		
Air Passengers Prediction Time Series Analysis Self Project			
Objective	➤ To predict the number of passengers that will board the flight in subsequent months using time series analysis.		
Approach	<ul style="list-style-type: none"> ➤ Performed Dicky-Fuller Test to check for stationarity. Decomposed time series into level, trend, seasonality & noise. ➤ Introduced stationarity through detrending by taking lag of 1 & also using the differencing technique. ➤ Built Time series models- AR, MA, ARIMA & SARIMA. Plotted ACF & PACF plots & found parameters (p,q,d). 		
Result	➤ Obtained RSS value of 1.0292 for ARIMA model & predicted no. of passengers for next year with 95% confidence.		
Boston Houses Price Prediction Statistical Modelling for Business Analytics Multiple Linear Regression			
Objective	➤ To predict the prices of houses in Boston district using Linear Regression		
Approach	<ul style="list-style-type: none"> ➤ Analyzed dataset consisting of 506 rows & 14 features & found out features affecting the house prices majorly. ➤ EDA: Plotted dist-plots, boxplots, scatterplots & correlation matrix to check for multicollinearity & VIF. ➤ Performed Breusch-Pagan test to check & understand heteroscedasticity in the dependent variable. 		
Result	➤ Obtained R ² value of 0.733 and adjusted R ² value of 0.723 with 95% confidence level.		
Credit Card Fraud Detection Applied Machine Learning Classification			
Objective	➤ To classify whether a given transaction is fraudulent or not using machine learning classification algorithms.		
Approach	<ul style="list-style-type: none"> ➤ Used under-sampling (Near-Miss) & over-sampling (SMOTE technique) method to deal with imbalanced dataset. ➤ t-SNE algorithm & Principal Component Analysis (PCA) were used for dimensionality reduction. ➤ Used classification algorithms: Logistic Regression, KNN, SVM, Decision Tree, XGBoost & AdaBoost for prediction. 		
Result	➤ Various classification metrics were used to compare the models. XGBoost & AdaBoost improved model performance.		
Cryptocurrency Dashboard Power BI			
Approach	<ul style="list-style-type: none"> ➤ Built a dashboard that displayed market trends of various cryptocurrencies like Bitcoin, Dogecoin, Ethereum, etc. ➤ Dashboard displayed stock price trend, highest price, lowest price, opening price, closing price & traded volume. 		
Customer Segmentation Analysis Applied Machine Learning Clustering			
Objective	➤ To segment the customers into different clusters so as to target each segment with a specific marketing deal.		
Approach	<ul style="list-style-type: none"> ➤ Applied RFM analysis & calculated Recency, Frequency and Monetary values for each customer. ➤ Used K-means clustering to segment customers. Elbow curve, Silhouette score was used to find optimum clusters. ➤ Visualized the clusters of customers on a 3D scatter plot with Recency, Frequency & Monetary values as the axes. 		
Result	➤ The customers were segmented into 3 groups: 'Best customers', 'New Customers', & 'Customers about to churn'.		
Stock Price Prediction Stochastic Processes Hidden Markov Models			
Objective	➤ To predict the price of stocks of a company using the concepts of Hidden Markov Models.		
Approach	<ul style="list-style-type: none"> ➤ Understood the concept of Hidden Markov Models: forward, backward, Viterbi & the Baum-Welch algorithm. ➤ 3 observed states were extracted from the company's stock price movement: 'fracChange', 'fracHigh' & 'fracLow'. ➤ GaussianHMM library was used to implement the Hidden Markov Model in Python and to predict prices for future. 		
Result	➤ The prediction of the prices of the company's stock was done with mean error in price prediction being Rs. 7.58.		
COURSEWORK & SKILLS:			*in progress

<i>Thesis Work*</i>	Truck Loading: The objective is to pack a set of items into stacks & to pack stacks into trucks to deliver to plants to minimize (a) the number of trucks used & (b) the inventory in the plants due to early deliveries.
<i>Relevant Courses</i>	Statistical Modelling for Business Analytics Applied Machine Learning Data Mining & Knowledge Discovery* Introduction to Computing Probability & Statistics Stochastic Processes & Applications
<i>Technical Skills</i>	Python SQL Power BI MS-Excel Data Structures & Algorithms JAVA C++ Data science & Machine Learning: Pandas, Numpy, Matplotlib, Seaborn, Scikit learn, RegEx, NLTK
ACHIEVEMENTS & CERTIFICATIONS:	
<ul style="list-style-type: none"> ➤ Academic Excellence Award in M.Tech (Industrial & Management Engineering), IIT Kanpur for the year 2021. ➤ Overall coding score of 398 at GeeksForGeeks practice problems portal. ➤ Secured AIR-243 in GATE-2021 in Mechanical Engineering branch. ➤ Won 2nd prize in Junkyard Wars in TECHSPARDHA fest @ NIT Kurukshetra. ➤ Awarded scholarship from SJVN for 4 years of B.Tech for being among top 50 students of CBSE in H.P in 12th class. 	
POSITION OF RESPONSIBILITY:	
<ul style="list-style-type: none"> ➤ Senior Alumni & Corporate Relation Team, M.Tech (IME) , IIT Kanpur: <ul style="list-style-type: none"> ▪ Organized webinars & alumni meet on industry related topics and managed the logistics of the webinar. ➤ Students Activity Club (SAC) – NIT Kurukshetra <ul style="list-style-type: none"> ▪ Member of the SAC and organized the cultural festival CONFLUENCE. ▪ Part of the core team responsible for events Mathematica and Roadies. 	