

EDUCATION <span style="float: right;">*till second semester</span>			
Degree/Certificate	Institute	CGPA / %	Year
MTech (Industrial and Management Engineering)	Indian Institute of Technology, Kanpur	7.45*/10	2021 - Present
BE (Mechanical Engineering)	Indore Institute of Science and Technology	7.14/10	2014 -18
Higher Secondary Education (M.P State Board)	Swami Pritemdas Gobindram Academy	73.2%	2014
Secondary Education (M.P State Board)	Swami Pritemdas Gobindram Academy	60.16%	2012

### INTERNSHIP Data Analytics and Innovation Intern, IBSFINtech May'22-July'22

Bank Statement Classification	
<i>Objective</i>	<ul style="list-style-type: none"> <li>To classify bank statements for facilitating 'automation of reconciliation process'</li> </ul>
<i>Approach</i>	<ul style="list-style-type: none"> <li>Applied data pre-processing (removing symbols, digit extraction), feature engineering techniques (text vectorization using <b>TensorFlow's pre-trained universal-sentence-encoder model</b>)</li> <li>Handled <b>class imbalance</b> problem using <b>SMOTE</b> and <b>random oversampling</b></li> <li>Performed classification using <b>Naïve Bayes Classifier</b>, <b>Support Vector Machine</b> and <b>Random Forest</b></li> </ul>
<i>Result</i>	<ul style="list-style-type: none"> <li>Achieved Test <b>accuracy</b> of <b>99%</b> and Test <b>F-1 score</b> of <b>98%</b> using Random Forest</li> </ul>
Image classification	
<i>Objective</i>	<ul style="list-style-type: none"> <li>To classify image documents for facilitating 'document verification process'</li> </ul>
<i>Approach</i>	<ul style="list-style-type: none"> <li>Applied image pre-processing techniques (<b>flattening</b>, <b>augmentation</b>: image rotation, denoising, cropping)</li> <li>Used <b>TensorFlow pre trained model: MobileNet (v2)</b> to classify the images</li> </ul>
<i>Result</i>	<ul style="list-style-type: none"> <li>Achieved Train <b>accuracy</b> of <b>99.1%</b> and <b>Test accuracy</b> of <b>97.78%</b></li> </ul>

### KEY PROJECTS

RFM Analysis and Customer Segmentation   Applied Machine Learning   Clustering <span style="float: right;">Apr'22-May'22</span>	
<i>Objective</i>	<ul style="list-style-type: none"> <li>To analyze customers behavior for developing market strategies and plans</li> </ul>
<i>Approach</i>	<ul style="list-style-type: none"> <li>Analysed <b>RFM</b> (Recency, Frequency, Monetary) characteristics using <b>EDA</b> techniques</li> <li>Applied data pre-processing techniques (outlier removal: <b>winsorization</b>)</li> <li>Plotted <b>elbow graph</b> to identify the optimal number of clusters for <b>K-Means</b> clustering algorithm</li> </ul>
<i>Result</i>	<ul style="list-style-type: none"> <li>Observed <b>silhouette score</b> of <b>0.47</b> for the three clusters</li> <li>Visualized the 3 clusters using 3D plot based on the <b>amount</b>, <b>number of transactions</b>, and <b>most recent transaction</b></li> </ul>
Bike Sharing Demand Analysis   Statistical Modelling for Business Analytics   Multiple Linear Regression <span style="float: right;">Nov'21-Dec'21</span>	
<i>Objective</i>	<ul style="list-style-type: none"> <li>To understand the significant factors affecting the demand of shared bikes in the American market</li> </ul>
<i>Approach</i>	<ul style="list-style-type: none"> <li>Visualised <b>distplots</b>, examined <b>multicollinearity</b> with <b>correlation</b> and <b>VIF</b>, <b>Breusch-Pegan test</b> for <b>heteroskedasticity</b></li> <li>Performed feature elimination using <b>RFE</b> (Recursive Feature Elimination) based on <b>p-value</b></li> </ul>
<i>Result</i>	<ul style="list-style-type: none"> <li>Achieved <b>adjusted R<sup>2</sup></b> of <b>83.1%</b> with the final <b>OLS</b> model of only 12 input features with <b>95% confidence</b></li> </ul>
Analysis of Hurdles in Evolution of EV   Marketing Research <span style="float: right;">Apr'22-May'22</span>	
<i>Objective</i>	<ul style="list-style-type: none"> <li>To identify major Hurdles in Development and Expansion of EV market in India</li> </ul>
<i>Approach</i>	<ul style="list-style-type: none"> <li>Formulated <b>Management Decision</b> and <b>Market Research problems</b>, <b>Research Questions</b> and <b>Hypothesis</b></li> <li>Designed <b>questionnaire</b> for online survey using <b>Likert Scaling techniques</b>, collected 210+ primary sample responses</li> <li>Carried out <b>Exploratory</b>, <b>Descriptive Research</b> in <b>SPSS</b> using Convenience Random Sampling</li> <li>Analyzed the data using statistical tests (<b>One Sample t-test</b> with <b>95% confidence level</b>) to verify our <b>hypothesis</b></li> </ul>
<i>Result</i>	<ul style="list-style-type: none"> <li>Identified charging time, cost, and distance travelled per charge as major hurdles</li> </ul>
Forecasting Monthly Champagne Sales   Self Project   Time Series Analysis <span style="float: right;">Dec'21-Jan'21</span>	
<i>Objective</i>	<ul style="list-style-type: none"> <li>To forecast future monthly sales of 2 years using historical sales data of 9 years</li> </ul>
<i>Approach</i>	<ul style="list-style-type: none"> <li>Performed stationarity test using <b>ADF</b> (Augmented Dickey-Fuller) and <b>Differencing</b> to obtain stationarity</li> <li>Plotted <b>PACF</b> (Partial Autocorrelation function) and <b>ACF</b> (Autocorrelation function) to find optimal parameters p, d, q</li> <li>Applied <b>AR</b>, <b>ARIMA</b>, <b>SARIMA</b> models and used <b>MAPE</b> as evaluation metric</li> </ul>
<i>Result</i>	<ul style="list-style-type: none"> <li>Achieved test <b>MAPE</b> of <b>7.4%</b> using <b>SARIMA (1,1,1) x (1,1,1,12)</b> model</li> </ul>

### COURSEWORK & SKILLS \*in progress

<i>Relevant Courses</i>	<b>Statistical Modelling</b> for Business Analytics   Applied <b>Machine Learning</b>   <b>Probability &amp; Statistics</b>   Marketing Research <b>Data Mining</b> and Knowledge Discovery*   <b>Causal Inference</b> Methods for Business Analytics*
<i>Skills</i>	Python   ML Libraries: NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn   DL Libraries: TensorFlow   MySQL   SPSS   PowerBI
<i>Soft Skills</i>	Decision Making   Adaptability   Team Management   Communication Skills   Leadership   Team Work
<i>Certifications</i>	PowerBI Zero to Hero   SQL - MySQL for Data Analytics and Business Intelligence   Excel Skills for Business: Essentials

### POSITION OF RESPONSIBILITY Aug'22 - Present

Departmental Post Graduate Committee Student Nominee, M. Tech IME IIT Kanpur
<ul style="list-style-type: none"> <li>In charge of responding to students' academic concerns and, if required, mediating with the convener</li> <li>Maintain frequent communication with the DPGC convener and assist him/her with any academic-related needs</li> <li>Assist the PG secretary with departmental decisions</li> </ul>

### ACHIEVEMENTS & EXTRACURRICULAR

<ul style="list-style-type: none"> <li>Achieved <b>99.5</b> percentile with an <b>AIR 580</b> among <b>1.2</b> lakhs students appeared in GATE 2021 (ME)</li> <li>Awarded <b>5-star</b> Gold Badge in <b>SQL</b> under specialized skills at HackerRank</li> <li><b>Fitness Enthusiast</b>: underwent transformation from 102 kgs to 72 kgs in 12 months</li> </ul>
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