

# PRADNESH LACHAKE

Industrial and Management Engineering (M. Tech)

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## EDUCATION

Year	Degree	Institute	Performance
2019-Present	M. Tech (IME)	Indian Institute of Technology, Kanpur	8.27
2014-18	BE (Mechanical Engineering)	K. K. Wagh College of Engineering, Nasik	75.72%
2014	HSC, Maharashtra State Board	R. B. N. B. College, Shrirampur	67.23%
2012	SSC, Maharashtra State Board	K. J. Somaiyya High School, Shrirampur	80.40%

## INTERNSHIP

<b>Data Science Intern at Harvesting India Private Limited, Chandigarh</b>		<i>Apr'20-Jun'20</i>
<b>Project:</b> Transportation Management of Farmers' Products		
<b>Objective</b>	<ul style="list-style-type: none"><li>To determine the transportation cost required for a user to buy goods from a farmer</li></ul>	
<b>Approach</b>	<ul style="list-style-type: none"><li>Used <b>Geolocation, Geocoding, and Place APIs</b> to detect user location and its nearest railway stations</li><li>Performed <b>Web Scraping</b> with <b>Selenium</b> to get the shortest distance from the IR's website</li><li><b>Automated</b> the calculations in <b>Python</b> and the code was ready to run in the backend of the company's site</li><li>Other tools and libraries used are <b>Zapier, Airtable, Pandas, Airtable Python Wrapper, and Requests</b></li></ul>	
<b>Result</b>	<ul style="list-style-type: none"><li>User could get the cost of buying selected farmer's product automatically after allowing location access</li></ul>	

## ACADEMIC PROJECTS

<b>Statistical Modelling for Business Analytics</b>	<b>Travel Insurance Claim Status Prediction</b>	<i>May'20-Jun'20</i>
	<ul style="list-style-type: none"><li>Performed <b>Data Cleaning</b> and <b>EDA</b>, used <b>t-test</b>, and addressed <b>class imbalance</b> by <b>sampling</b> techniques</li><li>Developed <b>Probit</b> and <b>Logit Regression</b> models for prediction and used <b>k-fold Cross-Validation</b></li><li>Logit Regression model was the best predictor with <b>F1-score 0.82</b> and <b>AUC in ROC plot 0.78</b></li></ul>	
	<b>Forecasting of Covid19 Cases and Resulting Fatalities</b>	<i>Apr'20-May'20</i>
<b>Applied Machine Learning</b>	<ul style="list-style-type: none"><li>Carried out <b>Panel Data Analysis</b> using Pooled, Fixed Effect, and Random Effect Regression models</li><li>Used the <b>LM test, F test, and Hausman test</b> to check the panel effect considering <b>P-value</b></li><li>Selected <b>Time Fixed Effect Regression</b> model for prediction considering the better <b>Adjusted R<sup>2</sup></b> value</li><li>Predicted number of confirmed cases and fatalities with <b>R<sup>2</sup> value 0.53</b> and <b>0.34</b> respectively</li></ul>	
	<b>Online Retail Customers Segmentation</b>	<i>Mar'20-Apr'20</i>
	<ul style="list-style-type: none"><li>Applied <b>Feature Engineering</b>, removed statistical <b>outliers</b>, and performed <b>Standardization</b></li><li>Used <b>K-Means Clustering</b> with 3 clusters based on <b>Elbow Method</b> and <b>Silhouette Analysis</b></li><li>Used <b>Agglomerative</b> and <b>Divisive Hierarchical Clustering</b> with 3 clusters based on <b>Dendrogram</b></li><li>Analyzed <b>3 customer segments</b> on the basis of Recency, Frequency, and Monetary</li></ul>	
<b>Data Mining and Knowledge Discovery</b>	<b>Car Price Prediction</b>	<i>Jan'20-Feb'20</i>
	<ul style="list-style-type: none"><li>Performed <b>Descriptive Analysis</b> and <b>EDA</b>, calculated <b>Correlation Matrix</b>, and checked <b>Multi-Collinearity</b></li><li>Used <b>RFE</b> and <b>VIF</b> for feature elimination and checked <b>Heteroscedasticity</b> by <b>Breusch-Pagan test</b></li><li>Built <b>Multi-Variate Linear Regression</b> models with the best model having <b>R<sup>2</sup> value 0.91</b></li></ul>	
	<b>Classify Sentiments from Movie Review</b>	<i>Sep'19-Nov'19</i>
<ul style="list-style-type: none"><li>Preprocessed the text using <b>Tokenization, Stemming, Lemmatization, and Stop Words</b> removal</li><li>Used <b>Count-Vectorizer</b> and <b>TF-IDF</b> for feature extraction and performed <b>Min-Max Scaling</b></li><li>Implemented <b>Naive Bayes, Logistic Regression, Random Forest, SVM, and KNN</b> classifiers</li><li>Logistic Regression model on TF-IDF was the best predictor with <b>64% accuracy</b></li></ul>		

## COURSEWORK AND SKILLS

<b>Relevant Courses</b>	Probability and Statistics ▪ Introduction to Computing (Java) ▪ Data Mining and Knowledge Discovery ▪ Applied Machine Learning ▪ Statistical Modelling for Business Analytics ▪ Operations Research for Management
<b>Technical Skills</b>	Python (OOPs, Pandas, NumPy, Matplotlib, Seaborn, SciPy, Scikit-Learn, PyTorch, NLTK, Regex) ▪ SQL ▪ Machine Learning ▪ Deep Learning ▪ Data Structure ▪ R ▪ Java ▪ Matlab ▪ MS Office
<b>Online Certification</b>	<ul style="list-style-type: none"><li>Completed a <b>Certified Career Path</b> on Data Science from <b>Codecademy</b></li><li>It consists of a total of <b>11 courses</b> and <b>30+ guided projects</b> on the following areas: <b>Programming ▪ Data Analysis ▪ Data Visualization ▪ Statistics ▪ Machine Learning ▪ NLP</b></li></ul>

## POSITIONS OF RESPONSIBILITY

<b>Coordinator at Adventure Sports Club, IIT Kanpur</b>	<i>Jun'20-Present</i>
<ul style="list-style-type: none"><li>Organized a month-long <b>online fitness workshop</b>: "A Never-Ending Adventure", for IIT Kanpur campus community</li></ul>	
<b>Secretary at Adventure Sports Club, IIT Kanpur</b>	<i>Sep'19-Jun'20</i>
<ul style="list-style-type: none"><li>Served as a <b>Trek Leader</b> in the trekking expedition to Sandakphu, Darjeeling, West Bengal in March 2020</li><li>Carried out 40 days <b>conditioning camp</b> and <b>marathons</b> for enhancing <b>fitness</b> and selection of the trekkers</li><li>Served as an <b>Assistant Trek Leader</b> in the trekking expedition to Annapurna Base Camp, Nepal in October 2019</li></ul>	

## ACHIEVEMENTS

<b>Co-Curricular</b>	<ul style="list-style-type: none"><li>Received an <b>internship offer</b> from <b>Praktice.AI</b> as a <b>Data Analyst Intern</b> for summer 2020</li><li>Secured <b>All India Rank 787</b> in GATE (ME) 2019 and achieved <b>99.53 percentile</b></li><li>Secured <b>1<sup>st</sup> rank</b> in the department in the first year of Under Graduation (2014-2015)</li></ul>
<b>Extra-Curricular</b>	<ul style="list-style-type: none"><li>Completed <b>135 km cycling trip</b> with Bicycling Society, IIT Kanpur in February 2020</li><li>Managed a two-day <b>Automobile Overhauling Workshop</b> for enthusiasts at KKWIEER in 2016</li><li>Volunteered a <b>Poster Competition Event</b> at an annual technical festival of KKWIEER in 2016</li><li>Taught underprivileged students computer basics and women empowerment in a <b>5-day camp</b> in 2016</li></ul>