# Tour Guide and Cost Estimator Using Machine Learning

**Aashish Kumar**
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## *Abstract*

In this report ,I have proposed the idea of using a model which will predict the tour cost and a Chat Bot which will be based on NLP /AI to help the new visitor as a guide when they visit a new city .
The proposed technology will analyze the user demand and will advise users to get the optimum way or best advice for expenditure in a new city depending upon customer's ability to spend and service quality.

Example if any tourist(Specific Case) wants to visit Darjeeling from Delhi.
*[ Package by Travel Agency =Rs. 40,000 , Total Time Taken =5N ,6 Transfers ,2 Food ]*

***Using proposed Technology***
**Case-1 User demand [**Transport Quality = Fast , Food Quality = 3* , Budget= Rs.25,000]
*Advice [ 6days Hotel =Rs.9,000 ,6 transfer by Sharing Cab = Rs. 3600 ,14 Foods =Rs.7000 ]*
*Total Expense = Rs.19,600*

**Case-2 User demand** [ Transport Quality = Average, Food Quality =2* , Budget = Rs.15,000]
*Advice [ 6days Hotel =Rs.6000 ,6 Transfer by public Bus=Rs. 1500 ,14 Food = Rs.4900 ,*
*Total Expenses =Rs. 12,400*

*ChatBot will guide users to get a sharing Cab , to find suitable hotels and restaurants in both cases .*


1. **Problem Statement**
   Nowadays traveling across a new city/state is very common in the world. It may be because of a job transfer,tour,or anything but when a person visits a new city then he faces huge charges for transportation , hotels,food,etc .People feel harassed due to overcharges by hawkers,duper,travel agency,etc.Also because of not knowing public transport systems or other goverment services people often get tricked by private players and pay more prices.Also,sometimes they feel forced to buy packages from travel agencies as a compulsion .

2. **Market/Customer/Business need Assessment**
   Common people are very much stressed because of the extra spending. They need something which could help them to get rid of this .Through proper suggestions and prior cost estimation and to make them aware about service quality with respect to price , would make them very much comfortable, millions of people will be using this while visiting a new city . Not only common people, local sellers like local cab drivers,small hotels ,food sellers ,etc would also benefit from it.

3. **Target Specification**
   - To generate revenue by charging fees for guide service
   - To generate revenue from small hotels and restaurants for securing their occupancy.
   - To get data and find patterns of Spending vs Destination/City .

4. **External Search**
   Delhi to Darjeeling Package cost {Make my Trip}

   Siliguri to Darjeeling Cab Fare

   Siliguri to Darjeeling Bus fare

   Cases of Overcharges

5. **Benchmarking**
   No organization provides this type of service, however travel agencies and companies which provide touring service have similar types of service.Also searching about particular locations some suggestions are available online.

6. **Applicable Patents**
   - **Patent 1- Geographic data and information Patent**
   - **Dynamic caching system**
   - **Logo and Trademark**

7. **Applicable Constraints**
   - Data collection for different location - Collection of data from remote area may turn into difficulties

- Data maintenance in different factors - Data updation and monitoring will be tidy tasks.

- Availability of service after recommendation -To check availability of services at a particular instance will be difficult.

**8. Applicable Regulation**

- Antitrust Regulation
- Interstate travel regulation
- Regulation against False advertising

**9. Business Opportunity**

As mentioned in previous remark this technology is not being used by any known company so doing business will be great.Also will have a monopoly .The emergence of this technology will be used by millions of users .So,there is a very fair chance to service society while making profit as well.

**10. Final Product Prototype**

The final product will be used by common people and they will get help to travel with the budget they want ,in an unknown city. It will also be helpful to get some insights about transportation fare and hotel rent for different locations of the country.It can be started from small scale( city or hill station) to big scale(Country or State) .

**11. Conclusion**

As from realizing the problem and finding a solution for it the proposed technique will have a great impact. By using Machine learning and NLP concepts users can be suggested for better options for their spending .Successful implementation will be admired by users.Things will need modification for practical implementation as per situation.