**Machine Learning Engineer Nanodegree**

**Capstone Project**

Kei Fukutani

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**Ⅰ. Definition**

**Project Overview**

This project is based on the Kaggle competition, "Expedia Hotel Recommendations". [1]

This competition is about a hotel search application that provides personalized hotel recommendations for its users. The customer data will be used to predict which types of hotels people are going to book.

I choose this competition, as there are a lot of situations in the real world that are similar to this kind of recommendation problems. I also believe that I can explore various machine learning techniques that are able to predict much better than human ability to solve this problem.

One of the early researches on this problem is the research paper by Gourav G. Shenoy et al. [2] (\*\* further explanation about domain background required.)

**Problem Statement**

**Metrics**

**Ⅱ. Analysis**

**Data Exploration**

**Exploratory Visualization**

**Algorithms and Techniques**

**Benchmark**

**Ⅲ. Methodology**

**Data Processing**

**Implementation**

**Refinement**

**Ⅳ. Results**

**Model Evaluation and Validation**

**Justification**

**Ⅴ. Conclusion**

**Free-Form Visualization**

**Reflection**

**Improvement**

**References**

[1] <https://www.kaggle.com/c/expedia-hotel-recommendations>

[2] Gourav G. Shenoy, Mangirish A. Wagle, Anwar Shaikh. "Kaggle Competition: Expedia Hotel Recommendations." Indiana University. arXiv:1703.02915 [cs.IR] 6 Mar 2017

[3] <https://www.kaggle.com/c/expedia-hotel-recommendations/data>

[4] <https://www.kaggle.com/c/expedia-hotel-recommendations#evaluation>