**Plan**

**Part I Research Steps**

**Step 1: Training**

Apply the Decision Tree model on the two data sets respectively.

Apply the K-NN model on the two data sets respectively.

Apply the Naive Bayes model on the two data sets respectively.

(Note: Please divide the dataset into a training set with 80% data and a test set with 20% data)

**Step 2:** **Evaluating**

Based on the first step, we can get six training models. Use Confusion Matrix to evaluate these six models and analyze their pros and cons.

**Step 3: Comparing**

Horizontal comparison: Compare the performance of the same training model on different data sets.

Longitudinal comparison: Compare the performance of different training models on the same data set.

**Part II Report**

1. Abstract
2. Keyword
3. Introduction
4. Training Model
   1. Decision Tree
      1. Dota 2 Data Set
      2. LoL Data Set
   2. K-NN
      1. Dota 2 Data Set
      2. LoL Data Set
   3. Naive Bayes
      1. Dota 2 Data Set
      2. LoL Data Set
5. Evaluating Model
   1. Decision Tree
      1. Dota 2 Data Set
      2. LoL Data Set
   2. K-NN
      1. Dota 2 Data Set
      2. LoL Data Set
   3. Naive Bayes
      1. Dota 2 Data Set
      2. LoL Data Set
6. Comparing
   1. Horizontal comparison
      1. Decision Tree
      2. K-NN
      3. Naïve Bayes
   2. Longitudinal comparison
      1. Dota 2 data set
      2. LoL data set
7. Conclusion

Summarize the comparison results in the sixth section. Discuss the performance pros and cons of the three models when applied to two different types of data sets.

**Part III Assign Work**

P1 : Decision Tree (training + evaluating + horizontal comparison) & Longitudinal comparison (Dota 2 data set) & Report’s 1 , 2 , 3 , 4.1 ,5.1 ,6.1.1 , 6.2.1 **(I can do this part)**

P2 : K-NN (training + evaluating + horizontal comparison) & Longitudinal comparison (LoL data set) & Report’s 4.2 ,5.2 ,6.1.2 , 6.2.2 (Who wants to do this part ?)

P3 : Naïve Bayes (training + evaluating + horizontal comparison) & Report’s 4.3 ,5.3 ,6.1.3 & Report’s Conclusion part (Who wants to do this part ?)