**Team: AING**

**Member:**

김지호 2018170622 정범순 2019171029 허원석 2019171015

**<Topic>**

we will make a machine learning algorithm which can weight data differently, and predict player’s future value from previous data.

**<Dataset>**

This dataset includes Player’s id, name, age, continent include nation, contract term, Player’s favorite position, prefer foot, reputation, overall(based on FIFA data), player’s potential, skill moves(based on FIFA data), player’s present value. We will find correlation between these data and player’s future value. Below is the column information.

# Column

age : age

continent : continent include player’s nation

contract\_until : contract term

position : favorite position(ex forward, back, midfielder,,

prefer\_foot : prefer foot ex) right foot

reputation : degree how the player is famous

stat\_overall : player’s present overall

stat\_potential : player’s potential

stat\_skill\_moves : player’s skill state

value : player’s value based on FIFA data.(euro)

**<approach>**

We are going to use Ensemble method, ‘Bagging’.

Bagging is a abbreviation of Bootstrap Aggregation. It is the method that learning several different models and aggregate those predictions to one result. If data is categorical, model aggregates data as voting, therefore final result is a most voted category. Otherwise, data is continuous, model aggregates data as average among model’s predictions. The most popular example of bagging method is ‘Random Forest’.

Out data doesn’t have clear answer. Therefore Bagging method is more proper with our topic. We will test 3 base estimator of bagging regressor (Decision Tree, Lasso Regressor, Non-linear regressor) and estimate with RMSE to decide best base estimator. More regressor could be tested if it is necessary.

**<Role>**

**김지호 (Team Leader)**

- Find appropriate machine learning model and optimize the model

- Construct machine learning model

**정범순**

- Edit the data and find other meaningful features for prediction

**허원석**

- Find similar papers for our topics and summarize paper’s machine learning methods.