

ATP Singles Game Outcome Prediction



MSiA 423

Wei Li



Motivation

Predict Outcome

to improve understanding of **deterministic features** in predicting ATP Singles' game outcome



Apply ML Models

to investigate the applicability of **machine learning** methods to the prediction of professional tennis matches

App Link: <http://tennis.us-west-1.elasticbeanstalk.com>

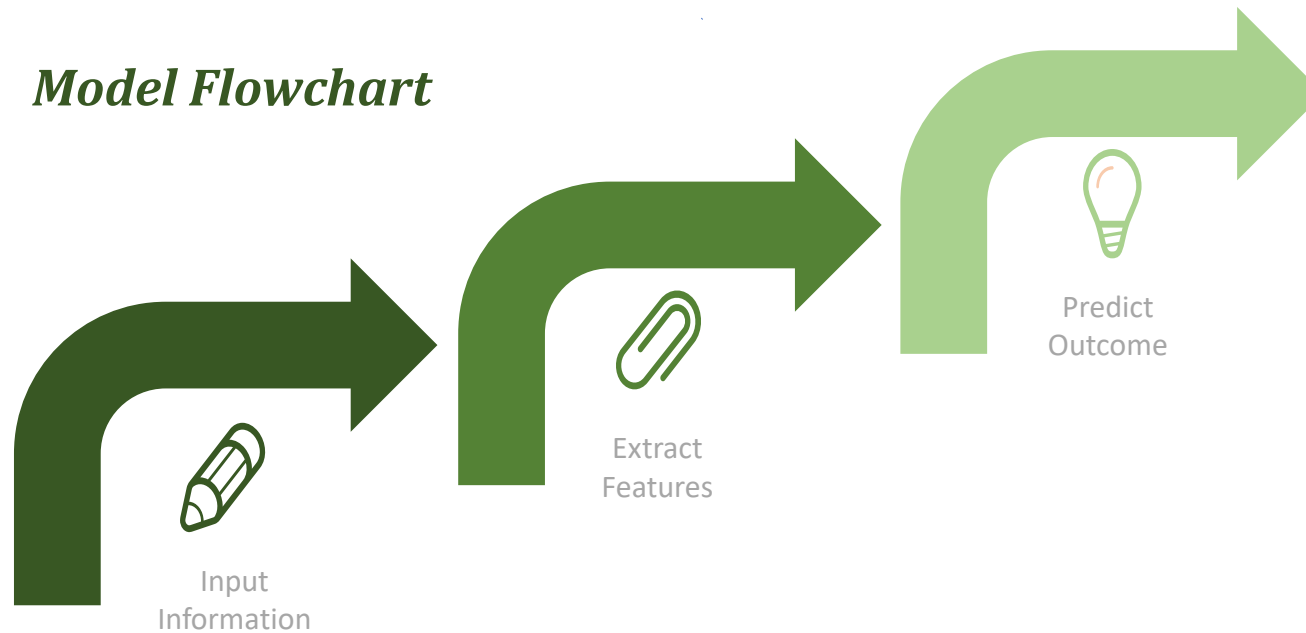
Data Description

- **Time range:** 2000.1.1 – 2017.12.31
- **Data size:** 50,000 game-level observations
- **Data scope:**
 - tournament level information: date, level, surface, etc.
 - Player level information: ranking, age, height, hand, etc.
 - In-game statistics: ace, serve point, break point, etc.
 - Players' recent rankings as of Feb, 2018

Model

- **Model:** Logistics Regression
- **Success Measurement:** accuracy $\sim 76\%$ under CV

Model Flowchart



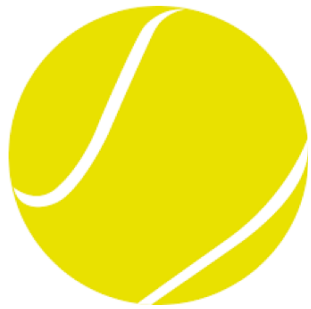
Insights

Federer-Nadal Rivalry

Federer v.s. Nadal
47% : 53%



v.s. others
>80%



Thank You for Watching!

(Github) <https://github.com/weiweiweiweili/MSiA-423>