Predicting players performance in League of Legends®

Applied Data Analysis
2016-2017

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League of Legends

Summoner
Player behind the computer

League
Based on Elo points
Reset for each season

Champion
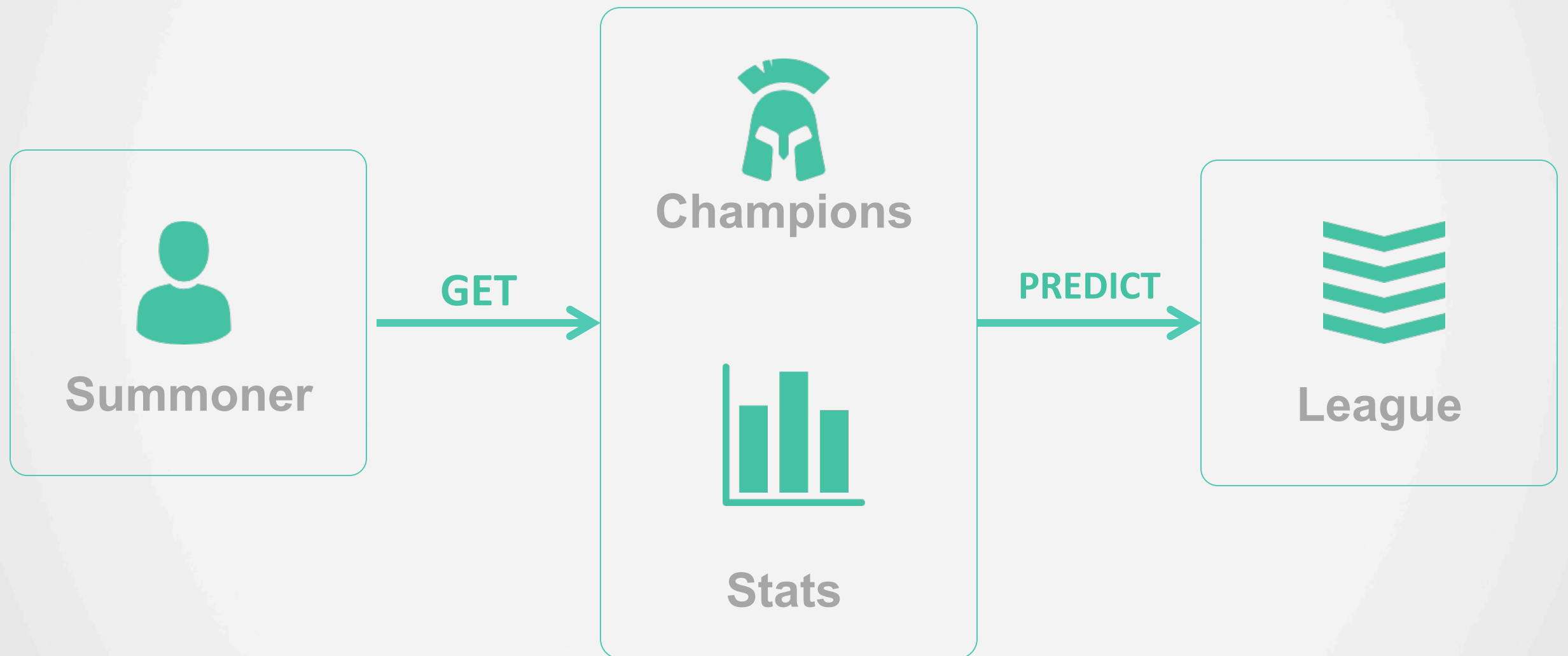Character played
(XX in total)

Bronze   **Silver**   **Gold**   **Platinum**   **Diamond**   **Master**   **Challenger**

Elo Points

What do we want to achieve?

Summoner

GET

Champions

Stats

PREDICT

League

Data Mining

5 INITIAL SUMMONERS
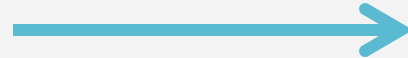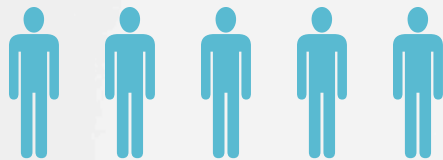
MATCH LIST - OPPONENTS

+30.000 SUMMONERS

Europe West Players

AGGREGATED STATS
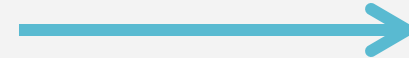
RIOT GAMES™ API
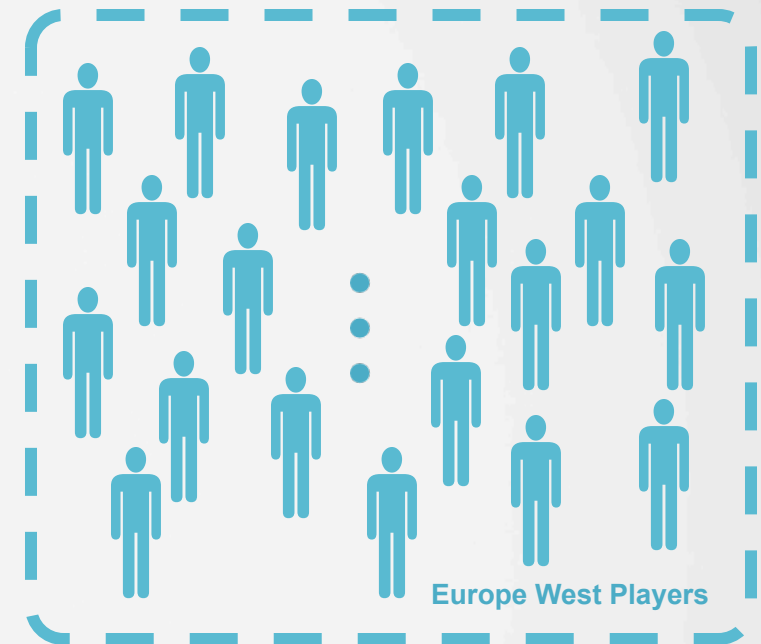
MOST PLAYED CHAMPION STATS

CHAMPION'S PASSIVE INFORMATION

LOLKING.NET

LEAGUE ACHIEVED

Data Wrangling and Analysis

01

Loading Data

From the Data Mining Pickles

02

Cleaning Data

Removing non-ranked Summoners

03

Feature Computation

KDA, Win Rate, Aggregated Stats

04

Data Inspection

Covariance and correlation matrix

05

Data Visualization

By Champion, Role and League

06

Data Storage

Update with the processed data
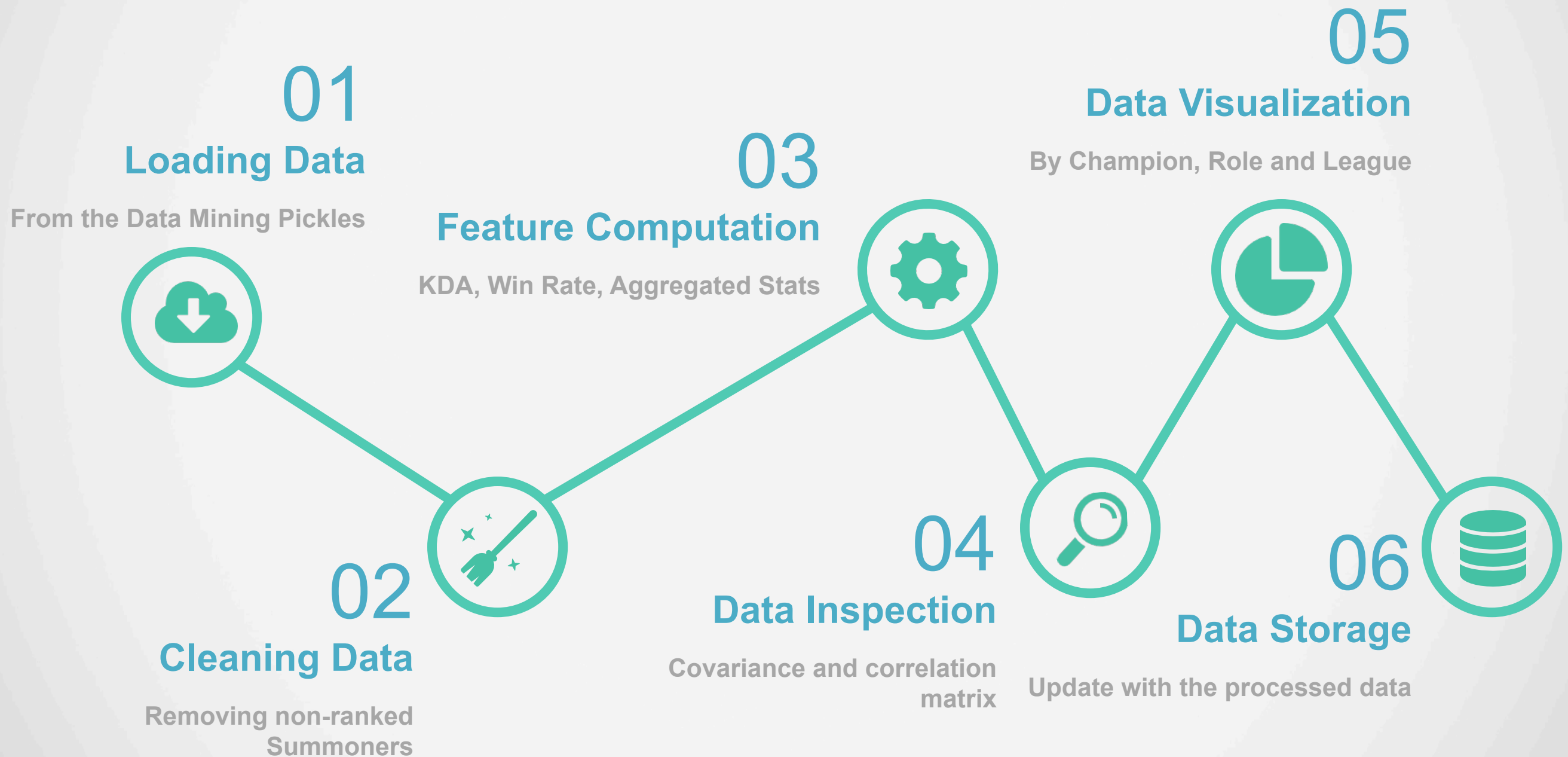
Feature Selection

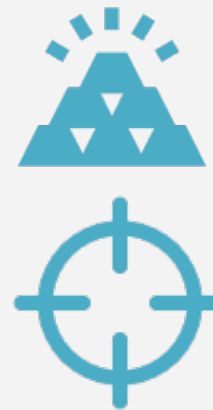| Univaried	Recursive	Using a tree
Most important future	Different features	Shouldn't Normalize
Maximum Number of Deaths	Maximum Number of Deaths Gold Earned Minions Killed Damage Dealt Damage Taken Multiple Kills Turrets Killed	

Machine Learning

SVM

40%

Accuracy
36,53%

Multi-Binary SVM

40%

Accuracy
31,82%

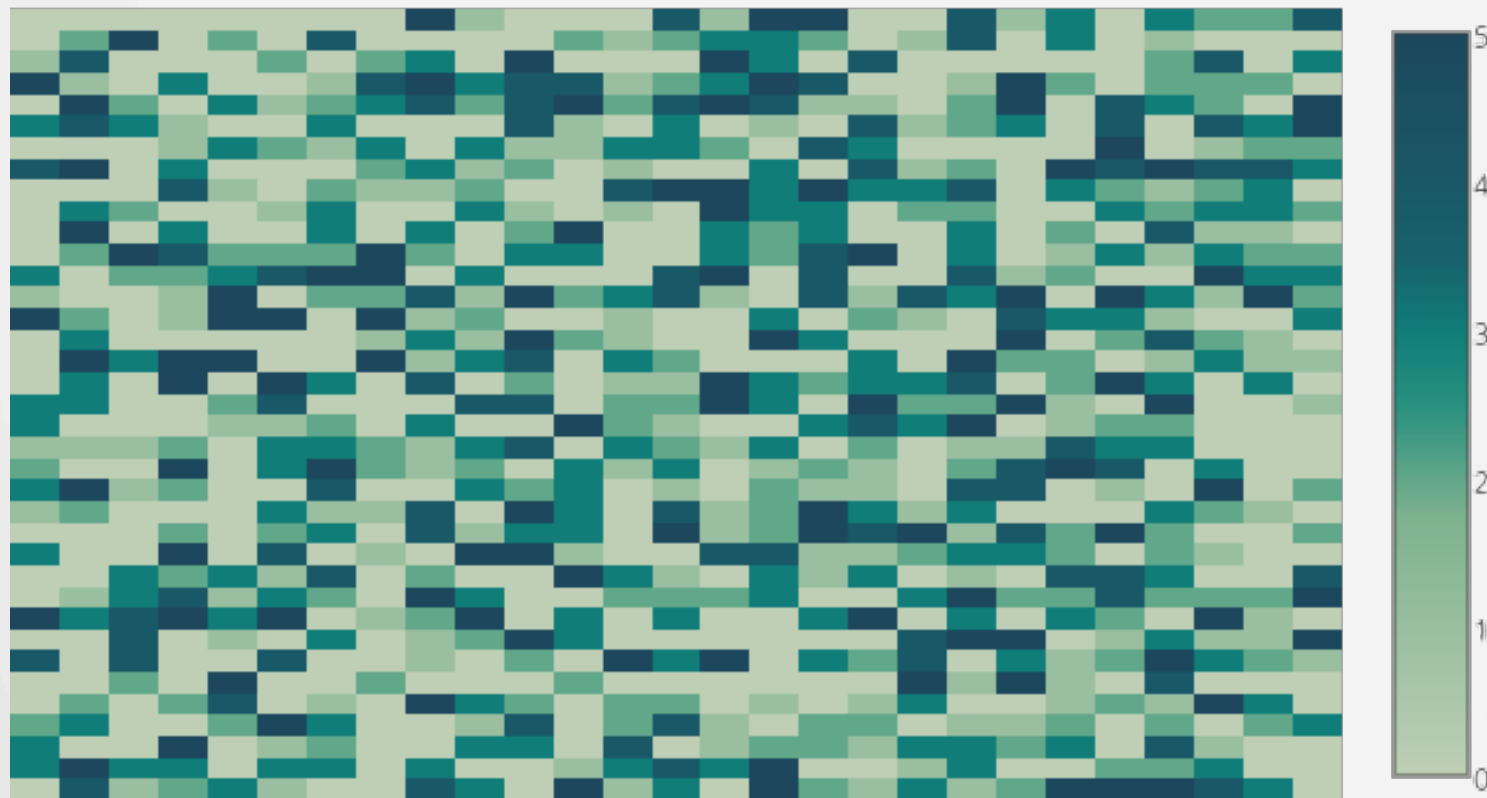## Random Forest

40%

Accuracy
33,53%

Results & Conclusions

Average League Error 0,96

Perfect League Accuracy 36,53%

Accuracy Heatmap 875 test users:

Comments

- **Individual Stats are not enough**

- **Strategic factors not taken into account**

Future work

- **Own Team Stats**
- **Opponents Stats**
- **Champion Role**