Data Science Union Winter 2021

Project Name: Predicting NBA Players' Salaries Using Machine Learning

Project Lead: Christine Hamakawa
Timeline: Winter Quarter (January to March 2021)

Overview:

The NBA (National Basketball Association) has been around for almost 80 years and has had thousands of players from all over the world. Each year, a player's annual salary is determined by the player's impact, which is measured by various factors: points per game, number of rebounds, 3-point field goal percentage, and so forth. Our goal is to determine the most influential factors on a player's salary, and then leverage machine learning to determine an algorithm that will enable us to best predict a player's annual salary based on these statistics.

Goals:

- Determine which statistics are the best predictors of a player's annual salary
- Build a machine learning model that best predicts a player's annual salary
- Get more practice with supervised regression machine learning algorithms
- Become more familiar with various Python packages, specifically Sci-kit learn

Required Skills:

- Basic Python knowledge (numpy, pandas, matplotlib, scipy)/R knowledge
- Basic knowledge of supervised regression machine learning algorithms
- Knowledge of entry-level statistics
- Git/GitHub

Preferred Skills: SQL

Expectations:

Team members will be involved in every step of the project (initial research, data cleaning, exploration of ML methods, data visualization, etc.). Time commitments may vary each week, and there will be weekly meetings/check-ins over Zoom.