Bodyweight Fitness and Powerlifting Subreddit Analysis

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Agenda

- Industry Background
- Problem Statement
- Recommendation
- Most Popular Words by Subreddit
- Model Evaluation
  - Confusion Matrix
  - Precision
  - Specificity
  - Accuracy

The Fitness Industry

The COVID pandemic has dramatically changed the fitness industry. Over 50,000 gyms have permanently closed and thousands remain temporarily closed due to State lockdowns. People have transitioned their workout programming to streaming services, such as Apple Fitness+ and YouTube or have focused on outdoor workouts, like running or hiking. Additionally, people have invested in at-home studios ranging from a yoga mat and free weights to cycling shoes and a Peloton. To adjust to industry wide paradigm shift in exercise, businesses will need real time information in order to invest in the future of fitness.

Problem Statement:

CRUNCH Fitness, an international fitness center and gym with more than 225 locations, wants data to help build an online fitness store and streaming service. Crunch needs to know how to market to different segments of the fitness market, specifically Bodyweight Fitness and Powerlifting.
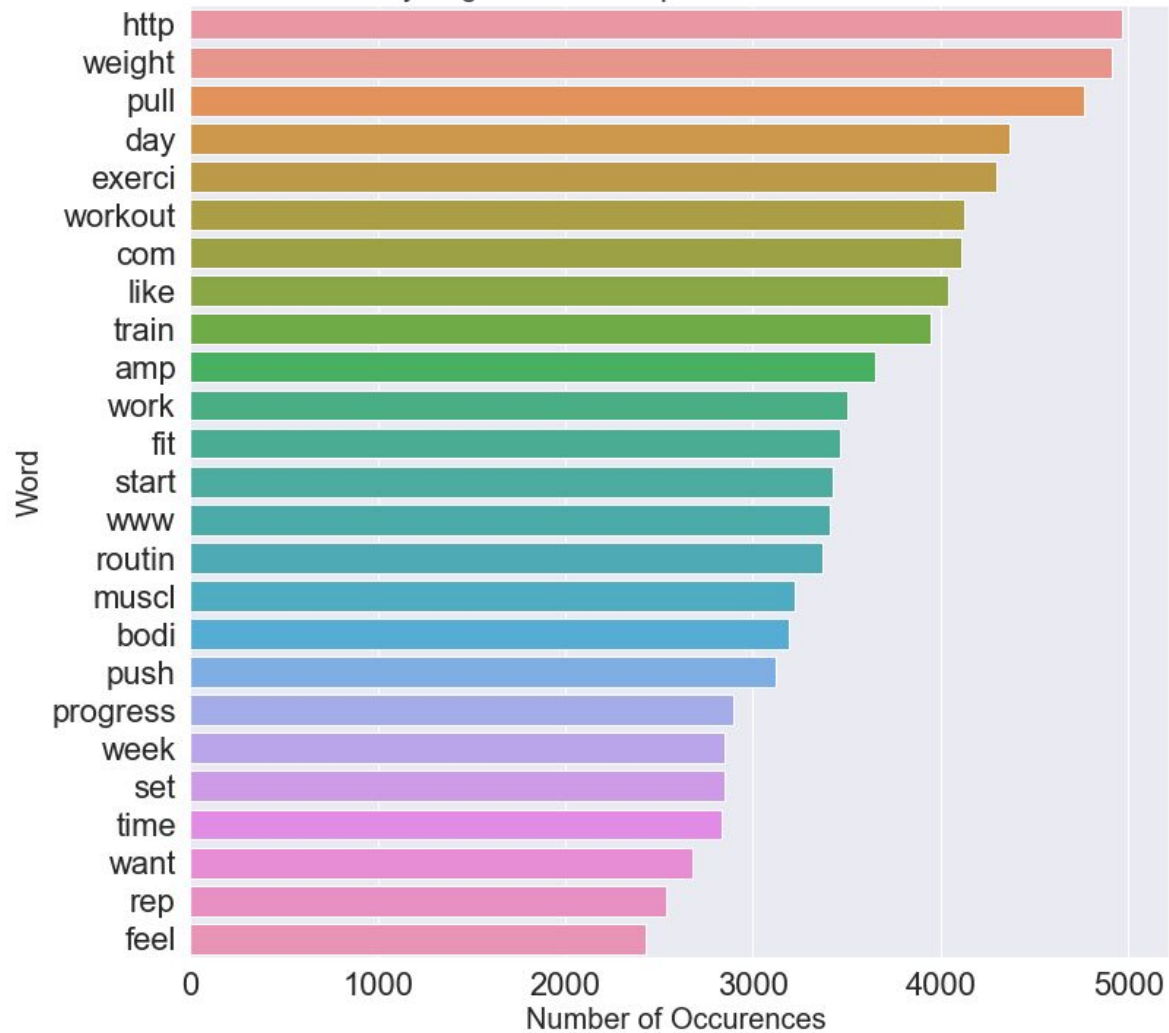
Recommendation: Use the Boosted Random Forest Model

Bodyweight Fitness:

- Online presence
- Opportunity to sell light equipment
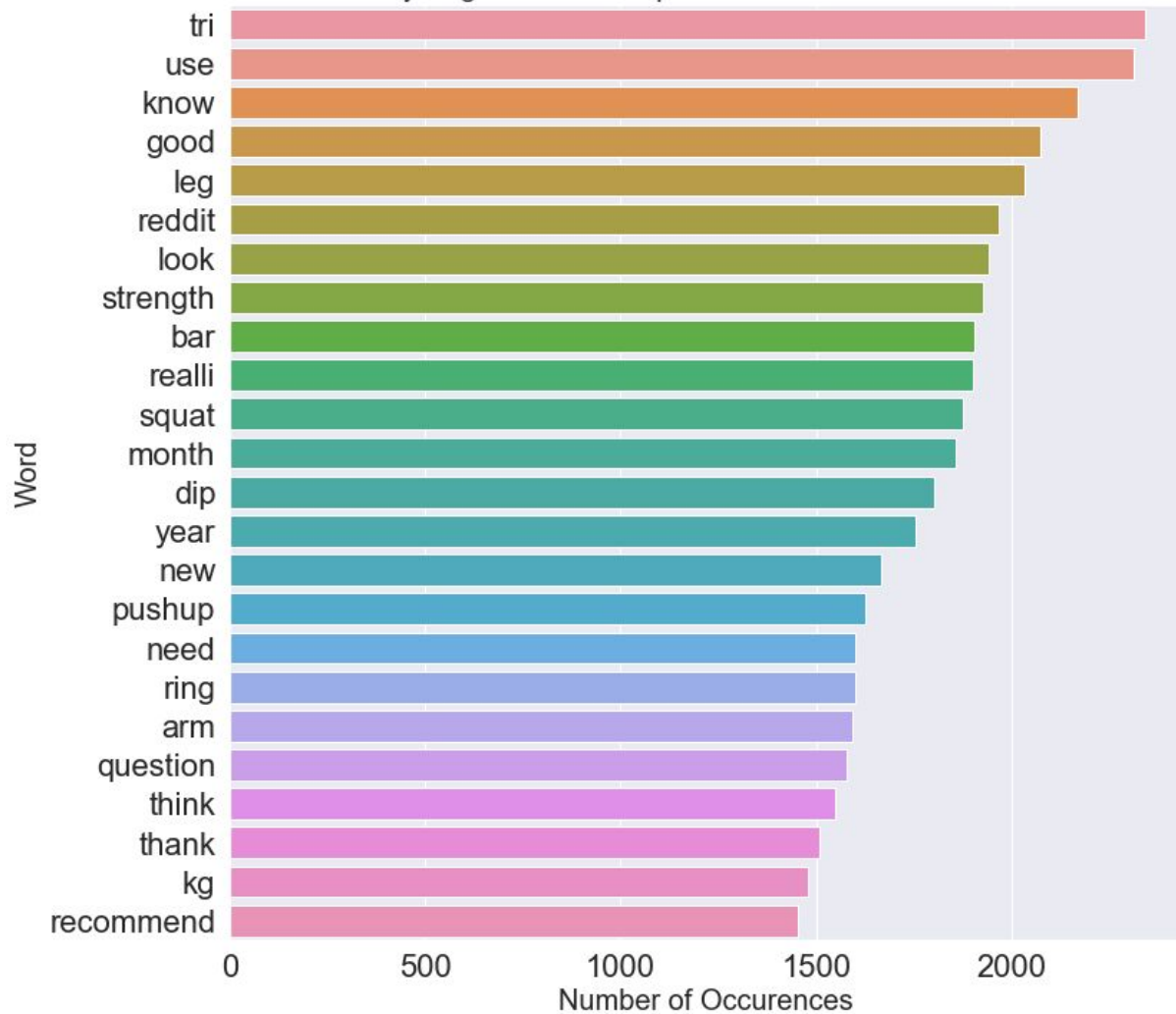- Fitness programming opportunities

Powerlifting:

- Physical gym presence
- Requires heavy equipment
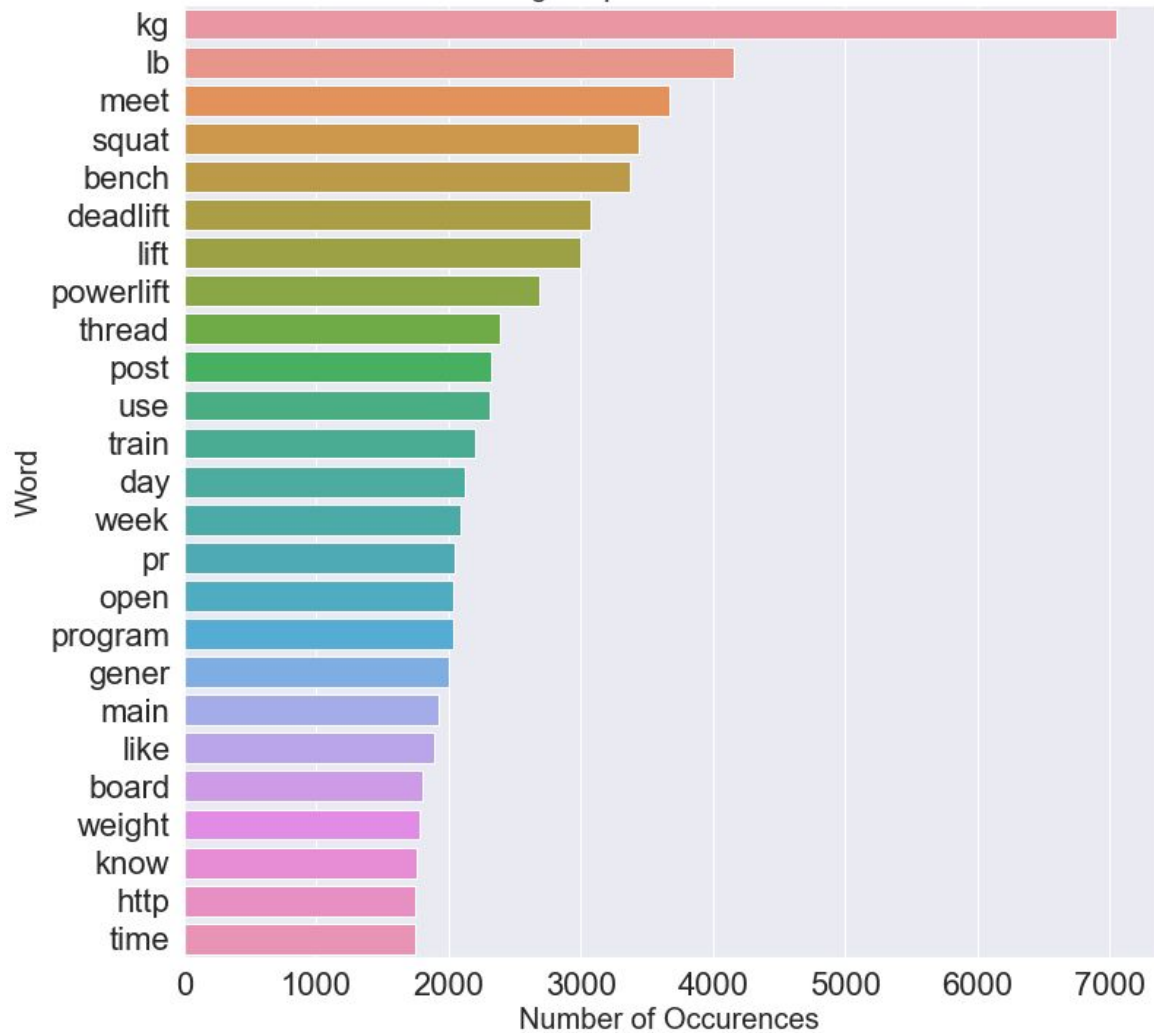- Fitness programming opportunities

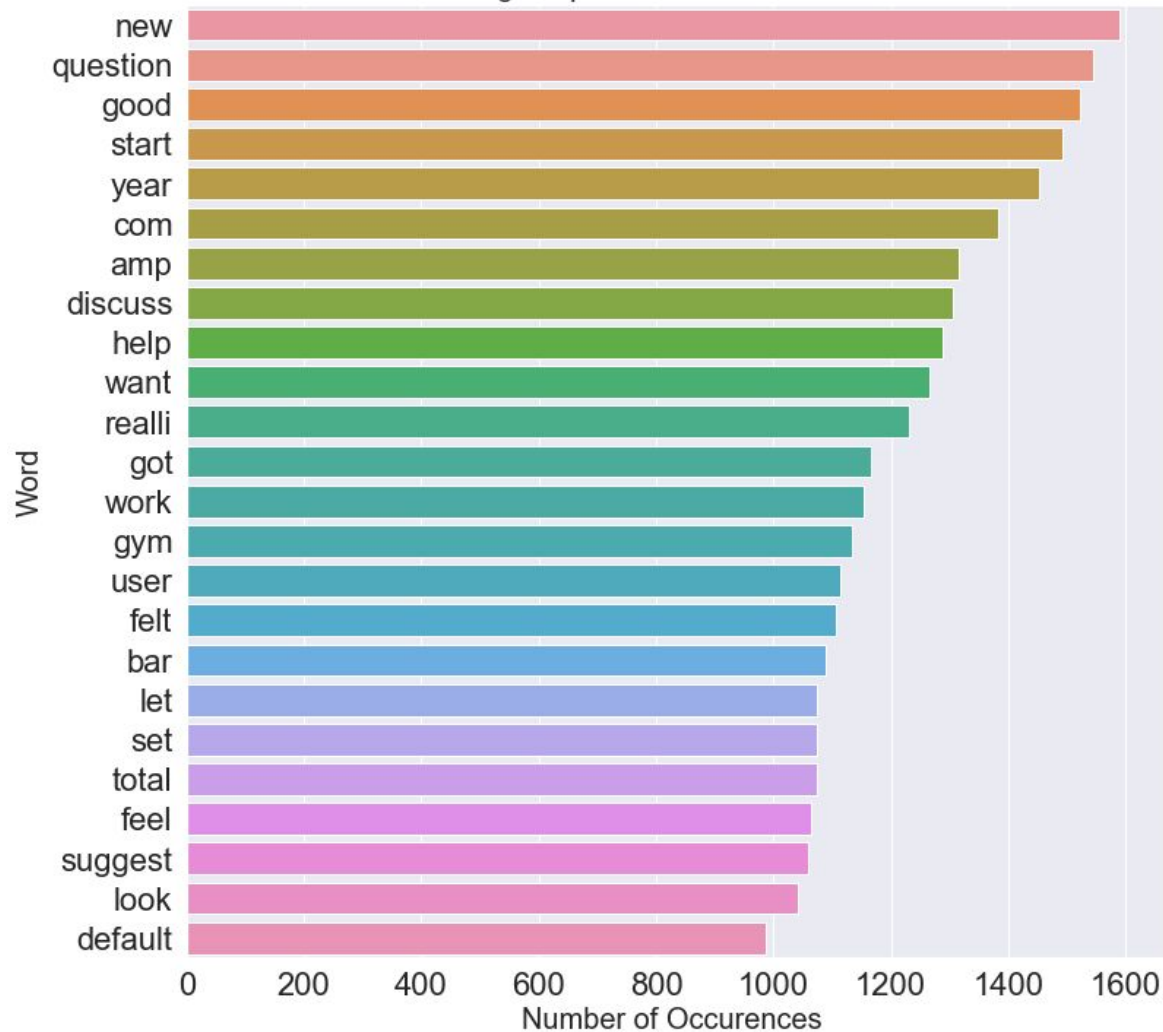Bodyweight Fitness - Top 25 Most Common Words

Bodyweight Fitness - Top 26 to 50 Most Common Words

Powerlifting - Top 25 Most Common Words
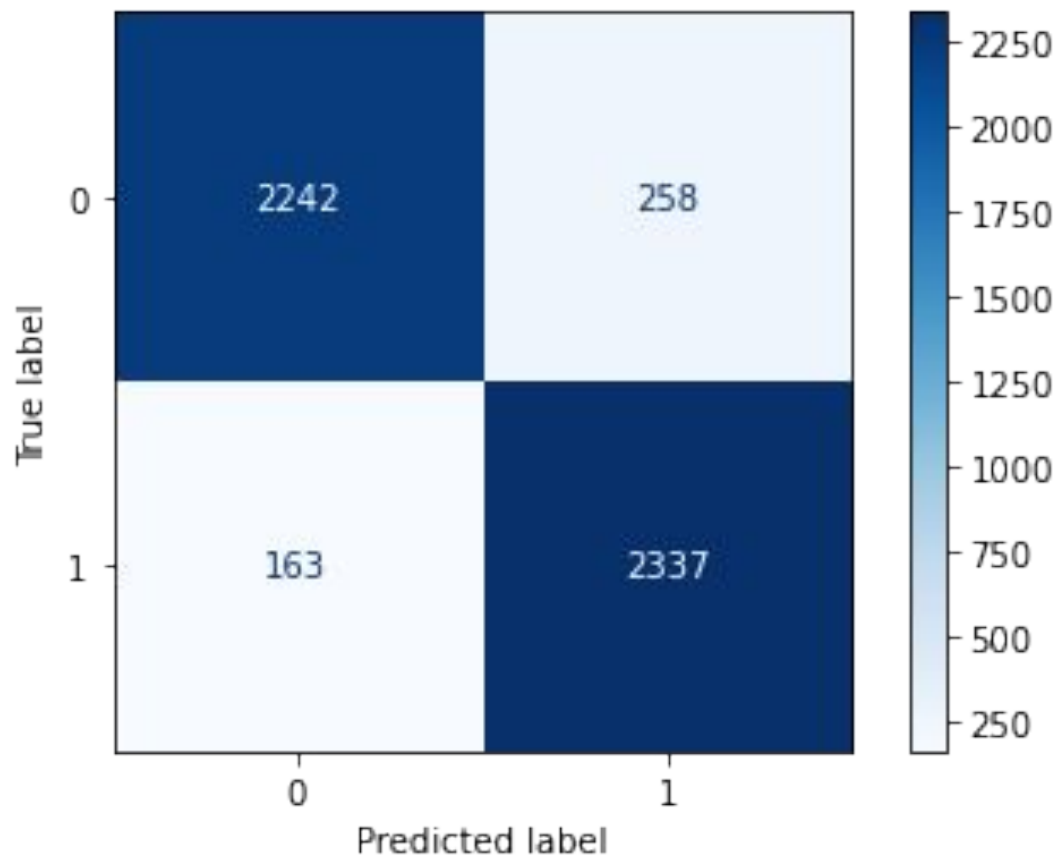
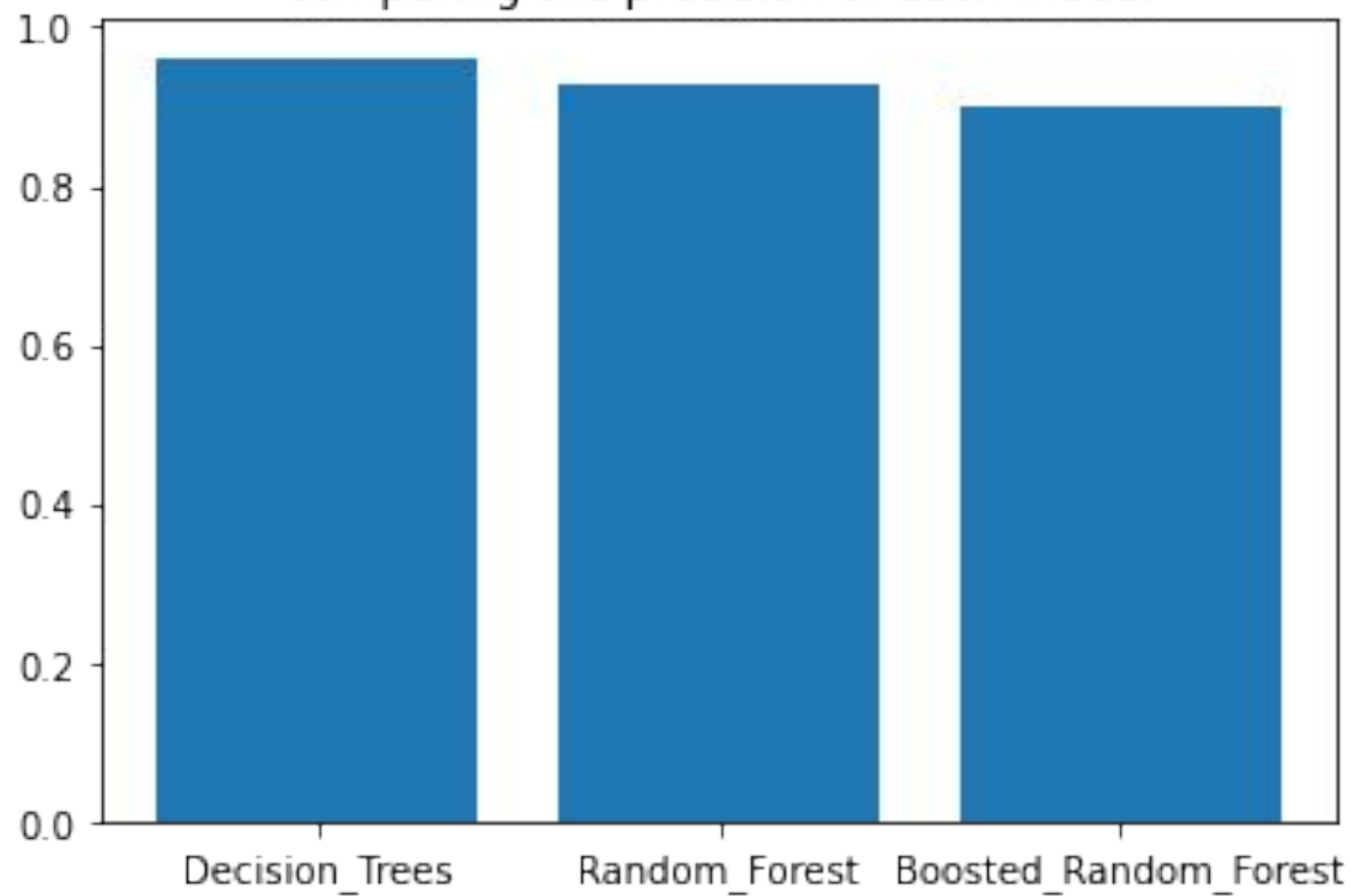Powerlifting - Top 26 to 50 Most Common Words

Top Words Similarity
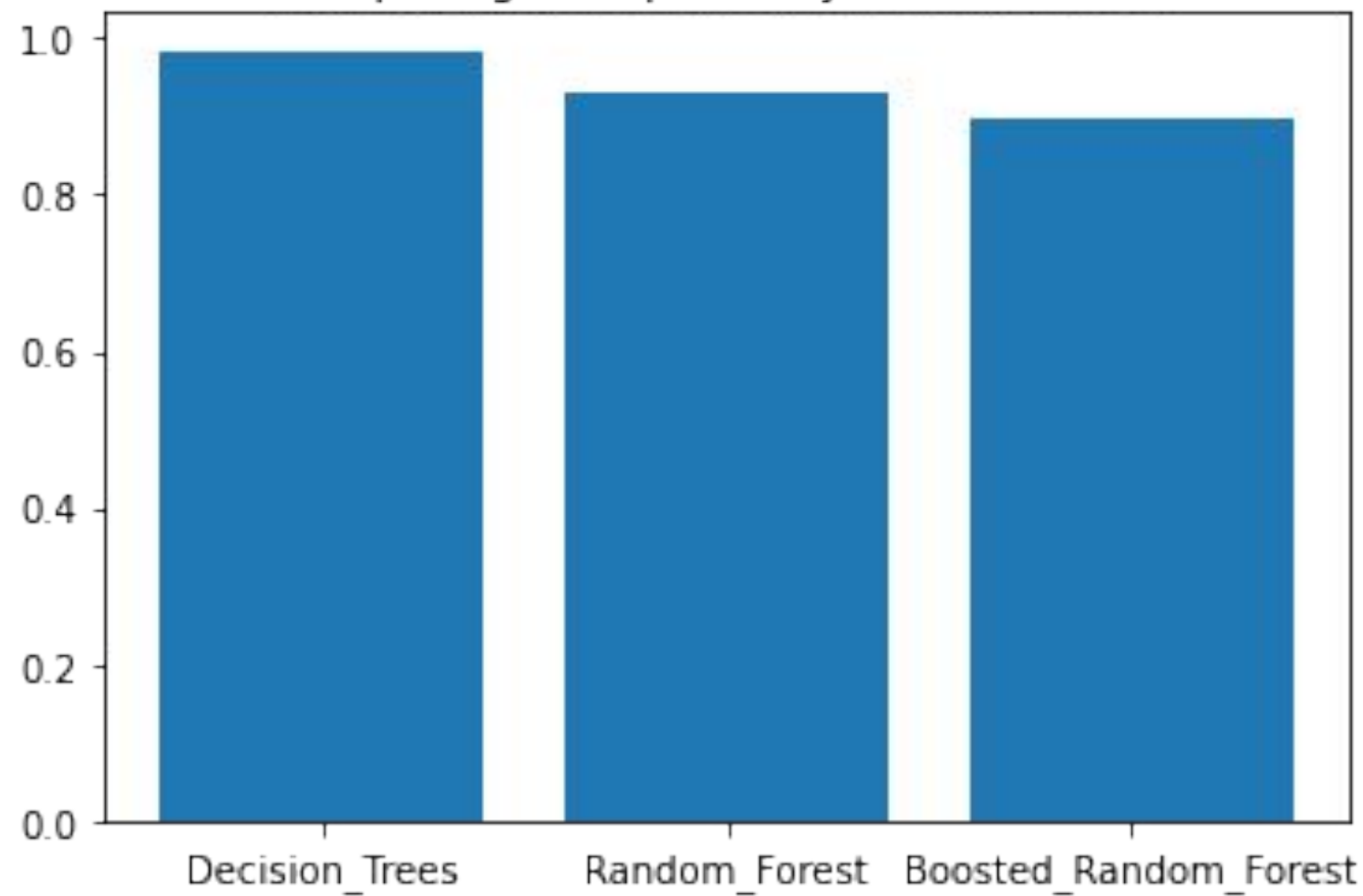
Weight

Squat

Program - day/week/month

Boosted Random Forest Model - Confusion Matrix

comparing the precision of each model

comparing the specificity of each model

comparing the accuracy of each model