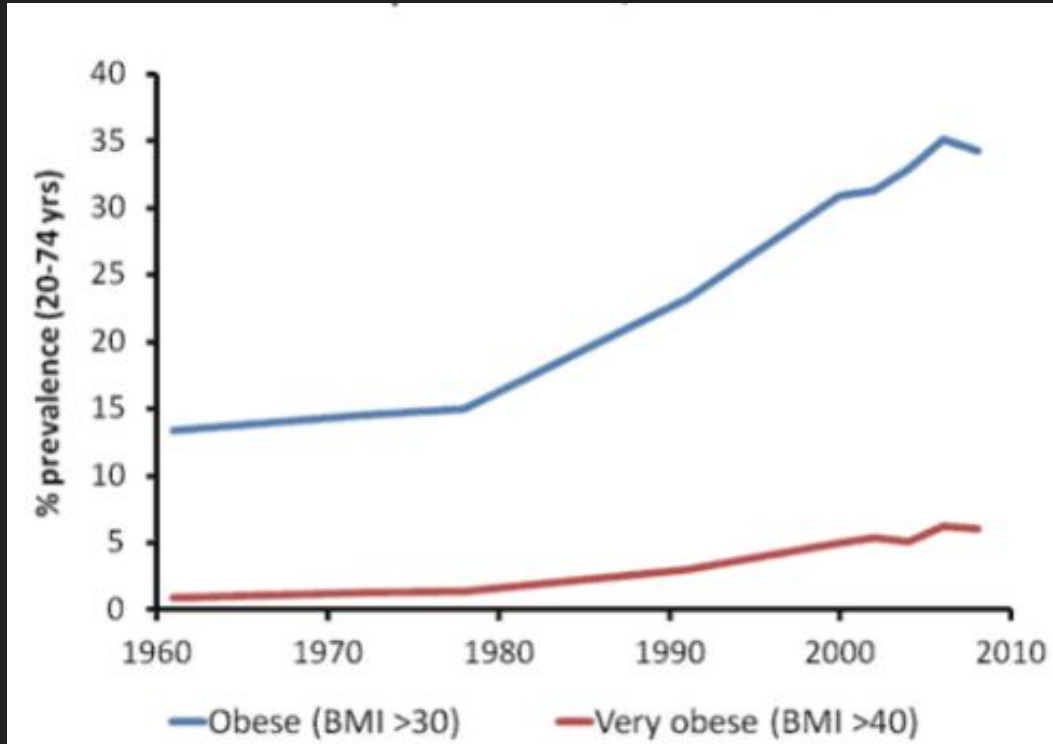


Nutrition, Health, & Weight

Nathan Knudsen

The Problem

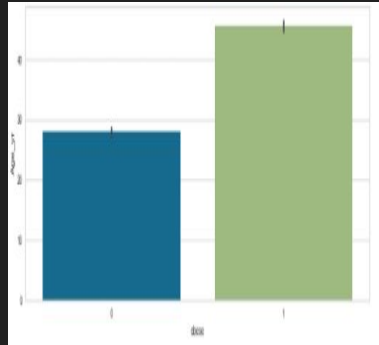


My Approach

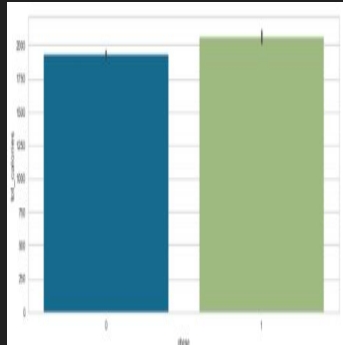
- NHANES 2013-2014 DataSet

| | Gender | Age_yr | #_diff_foods | tot_calories | total_protein | total_carb | total_sugar | total_fiber | total_fat | avg_visc_fat | waist | weight | ave_BP | adult |
|---|--------|--------|--------------|--------------|---------------|------------|-------------|-------------|-----------|--------------|-----------|----------|------------|-------|
| 0 | 0 | 69 | 11.0 | 1574.0 | 43.63 | 239.59 | 176.47 | 10.8 | 52.81 | 20.6 | 39.370079 | 172.6515 | 112.666667 | 1 |
| 1 | 0 | 54 | 8.0 | 5062.0 | 338.13 | 423.78 | 44.99 | 16.7 | 124.29 | 24.4 | 42.362205 | 197.3475 | 157.333333 | 1 |
| 2 | 0 | 72 | 27.0 | 1743.0 | 64.61 | 224.39 | 102.90 | 9.9 | 65.97 | 25.6 | 42.992126 | 196.0245 | 142.000000 | 1 |
| 3 | 0 | 9 | 19.0 | 1490.0 | 77.75 | 162.92 | 80.58 | 10.6 | 58.27 | 14.9 | 24.015748 | 71.0010 | 104.666667 | 0 |
| 4 | 1 | 73 | 7.0 | 1421.0 | 55.24 | 178.20 | 87.78 | 12.3 | 55.36 | 20.8 | 34.881690 | 114.6600 | 137.333333 | 1 |

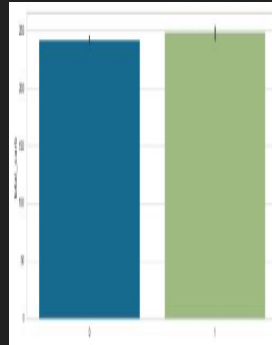
Exploratory Data Analysis



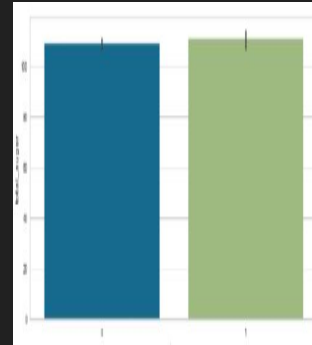
Age



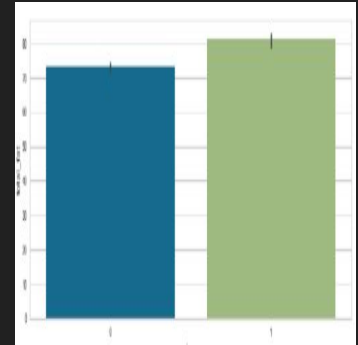
Total
Calories



Total Carb

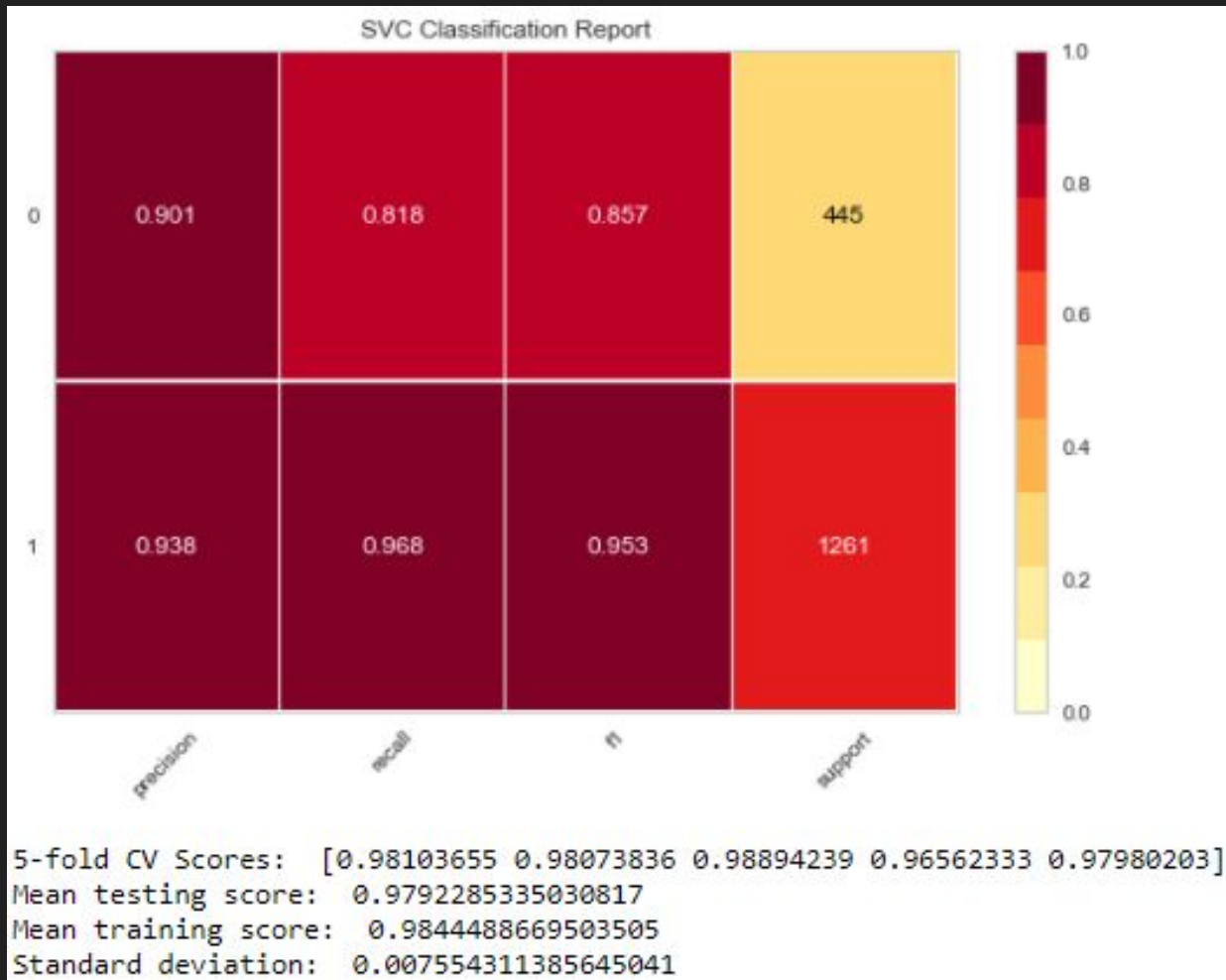


Total Sugar



Total Dietary
Fat

Modeling



Our Stakeholder

- David Greene

| Gender | Age_yr | #_diff_foods | tot_calories | total_protein | total_carb | total_sugar |
|--------|--------|--------------|--------------|---------------|------------|-------------|
| 0.0 | 64.0 | 8.0 | 2383.0 | 92.38 | 358.11 | 193.42 |

| total_fiber | total_fat | avg_visc_fat | waist | weight | ave_BP | adult |
|-------------|-----------|--------------|-----------|---------|-----------|-------|
| 15.6 | 70.85 | 36.5 | 62.047244 | 386.316 | 96.666667 | 1.0 |

3 Scenarios

- David Approaches Physician with some questions/recommendations for lifestyle changes
 - Implement friends lifestyle
 - Low-Fat Diet
 - Intermittent Fasting/Keto -- Low-Carb Diet

Scenario #1 - Implementing Friends Lifestyle

```
Congratulations! making the following lifestyle changes will lead you to a healthy weight!  
  Changing tot_calories from 2383.0 to 2021  
  Changing total_fat from 70.85 to 82.95  
  Changing total_sugar from 193.42 to 98
```


Scenario #2 - Low-Fat Diet

```
The following WAS NOT enough to make a healthy weight. more change is required
    Changing tot_calories from 2383.0 to 2600
    Changing total_carb from 358.11 to 400
    Changing total_sugar from 193.42 to 220
    Changing total_fat from 70.85 to 10
```

Scenario #3 - Low-Carb Diet -- IF/Keto

Congratulations! making the following lifestyle changes will lead you to a healthy weight!

Changing tot_calories from 2383.0 to 1500

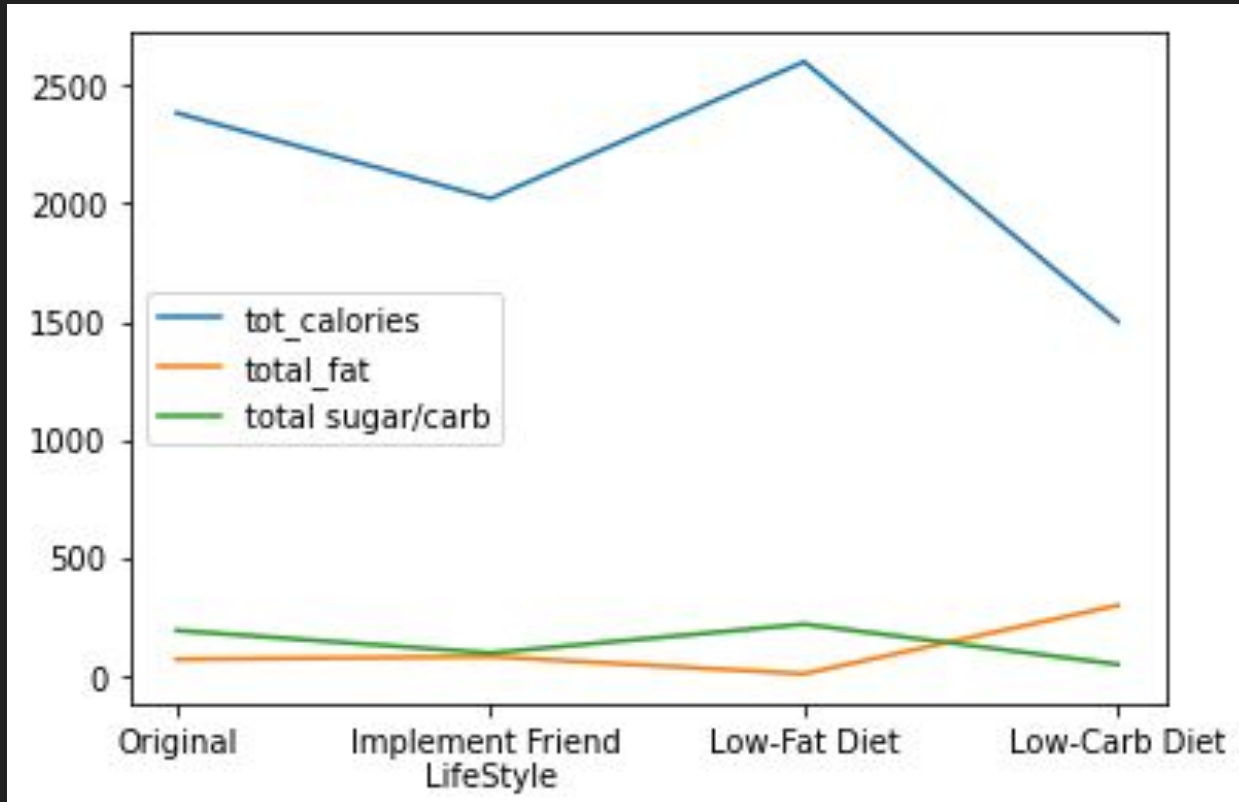
Changing total_protein from 92.38 to 100

Changing total_carb from 358.11 to 50

Changing total_sugar from 193.42 to 0

Changing total_fat from 70.85 to 300

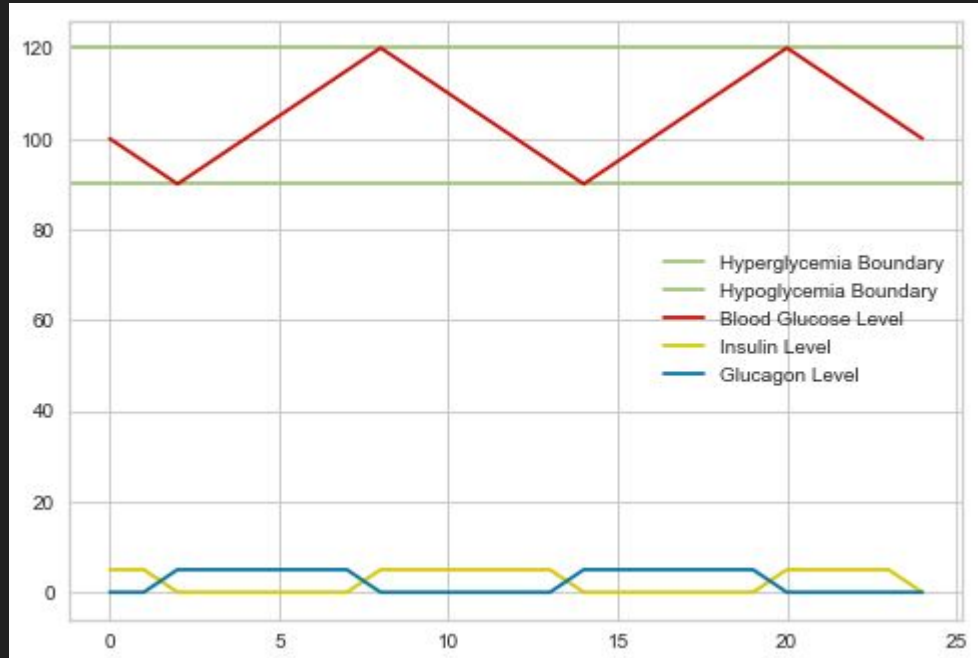
Macronutrient Distribution across scenarios



Recommendations

- Intermittent Fasting/Low-Carbohydrate

WHY?



Works Cited

Journal - did we start losing willpower in the Late 1970's? PALEOTERRAN. (n.d.).

<http://paleoterran.squarespace.com/journal/2012/3/26/did-we-start-loosing-willpower-in-the-late-1970s.html>.