

# Wine Score Prediction | Wine Recommender

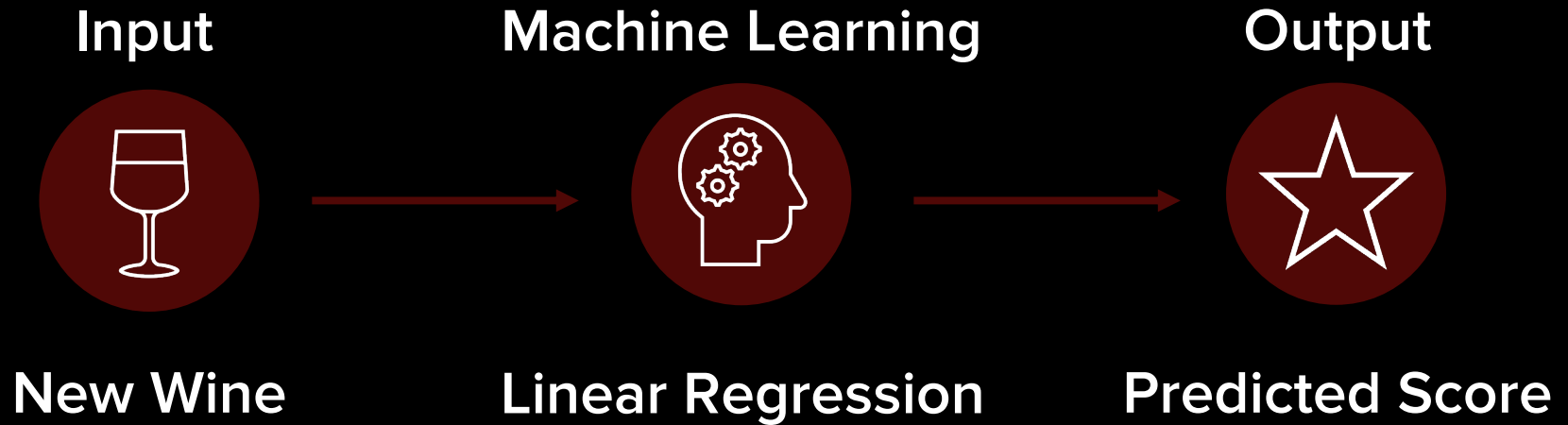
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Capstone Project - Annika Scholl



# Project Overview

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# Project Overview

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Input



Favorite Wine

Machine Learning



Cosine Similarity

Output



Most Similar Wines

A circular sunburst chart illustrating a hierarchical dataset structure. The inner ring represents the primary categories, and the outer ring represents the sub-categories. The categories are color-coded and labeled as follows:

- oak** (dark purple)
- non oak** (medium purple)
- spices** (blue-grey)
- black fruit** (olive green)
- red fruit** (red-orange)

The sub-categories in the outer ring include:

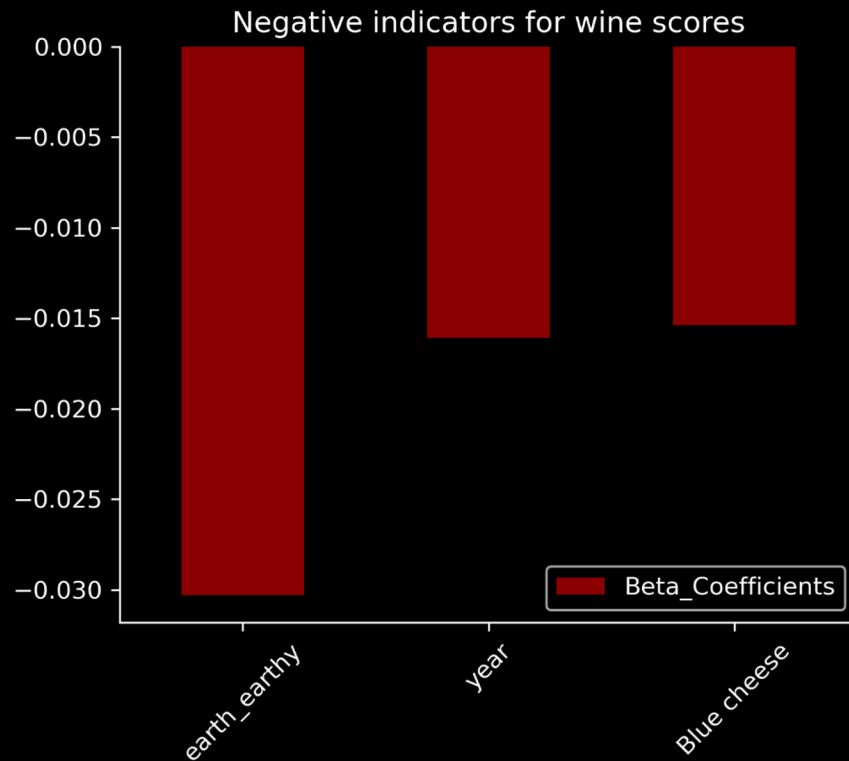
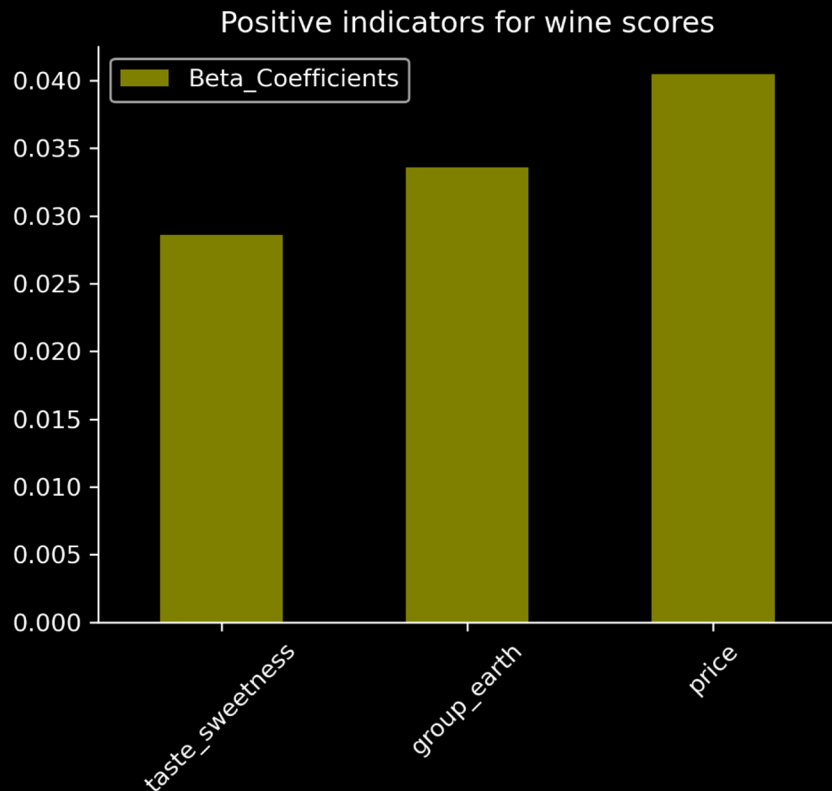
- leather, earth, smoke, mushroom, minerals, forest floor, cherry, raspberry, red fruit, strawberry, red cherry, cranberry, blackberry, plum, black fruit, blackcurrant, cassis, black cherry, dark fruit, blueberry, pepper, licorice, cinnamon, mint, toast, almond, nutty, hazelnut, dried fig, walnut, cream, cheese, violet, prune, rain, grass, citrus fruit, floral, dried fruit, vegetal, citrus fruit.

# Wine Score Prediction

Final Model: Ridge Linear Regression

| Evaluation | Train  | Test   |
|------------|--------|--------|
| R-squared  | 66.67% | 64.02% |
| RMSE       | 0.14   | 0.15   |
| MAE        | 0.11   | 0.11   |

# Wine Score Prediction



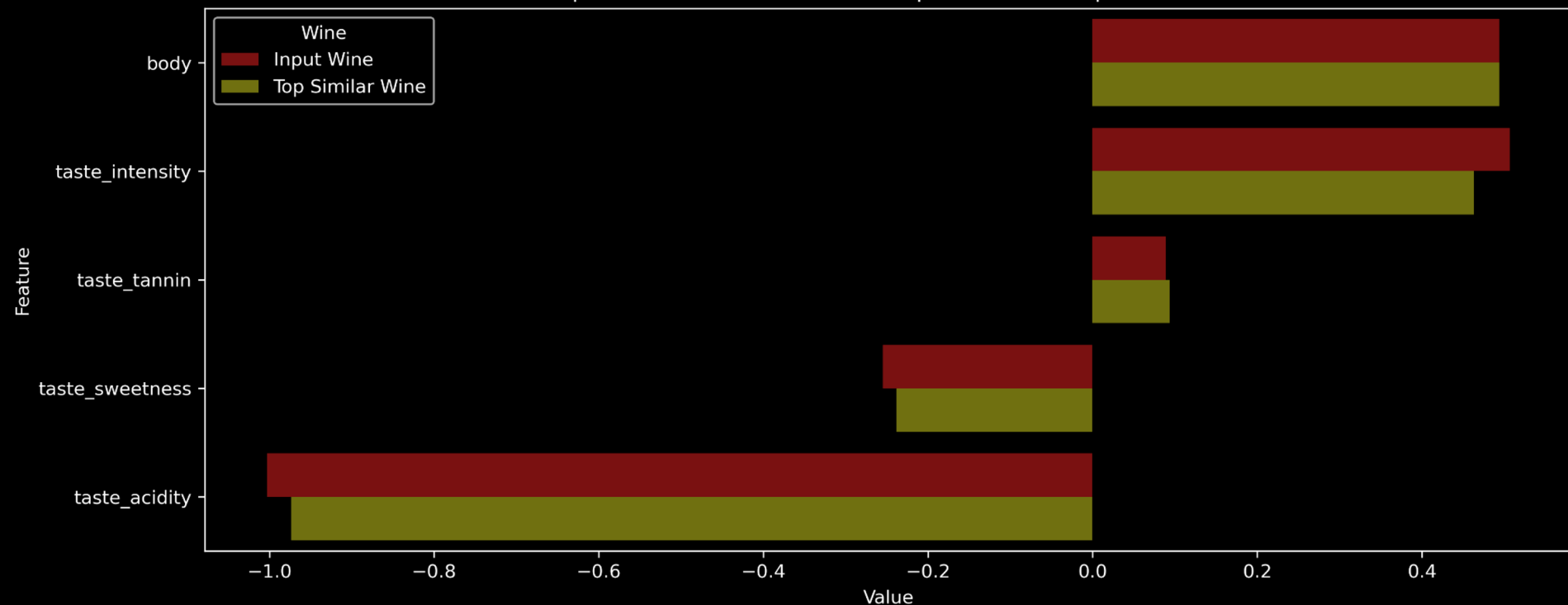
# Recommendation System

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| Features | Number of Features | Top Wine                 | Similarity |
|----------|--------------------|--------------------------|------------|
| Taste    | 5                  | Cuvée Tradition Gigondas | 0.99       |

# Recommendation System - Taste

Comparison of Features between Input Wine and Top Similar Wine

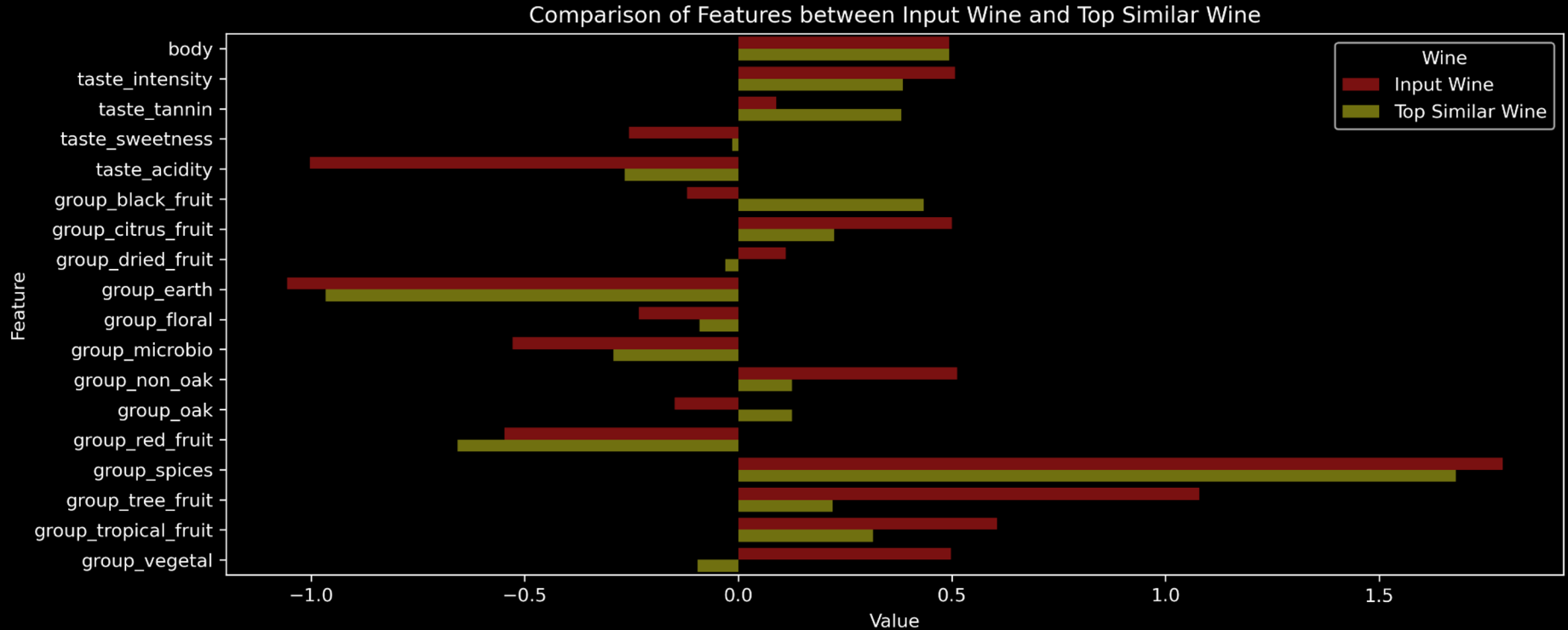




# Recommendation System

| Features             | Number of Features | Top Wine                    | Similarity |
|----------------------|--------------------|-----------------------------|------------|
| Taste                | 5                  | Cuvée Tradition Gigondas    | 0.99       |
| Food                 | 16                 | Lirac Roc-Epine             | 1          |
| Flavor Group         | 13                 | Heloise                     | 0.86       |
| All Features         | 486                | Saint-Joseph Rouge          | 0.28       |
| Taste + Flavor Group | 18                 | Pic-Saint-Loup Grande Cuvée | 0.84       |

# Recommendation System - Taste & Falvor



# Next Steps

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**Include more  
Filters**



**Try another Model:  
KNN**



**Scrap more Data**