

# Wine Recommendation System

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## Abstract

This project is meant to suggest a wine to the user according to his/her mood and venue using a Rule Based system. In order to do this they have to answer a series of questions to achieve the desired result.

## Introduction

Wine has evolved as part of life, culture and diet since time immemorial. As an enduring cultural symbol of fine life, the role of wine has evolved over time, changing from an important source of nutrition to a cultural complement to food and conviviality compatible with a healthy lifestyle.

The art of viticulture and winemaking has also evolved. Nevertheless, in this long historical path, one thing remains unchanged and has never been neglected; the association of wine with gastronomy, history, tradition, origin, local quality products and dignified social settings.

Cultural appreciation of wine reflects the diversity of the wine regions, the savoir-vivre and culinary habits. Quality products incite moderate consumption patterns, as it is only by savoring wine moderately and slowly that its unique complex flavors and character can be fully appreciated and enjoyed. Some people dedicate their lives trying to taste them. So this system is for those wine enthusiasts who have the slightest idea about them.

## Design and Implementation

Some of the questions that a user must answer include:

- Whether he is home or out?
- If he is alone or with someone?
- Is he at a restaurant, dinner at home, camping, drinking in public?
- Is it a special occasion?

The system is designed according to the flowchart shown below and is used as reference to create the rule base system.

# HOW TO CHOOSE A BOTTLE OF WINE

Begin by picking who's drinking it



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ORIGINAL SOURCE  
<http://winefolly.com/update/how-to-choose-wine/>



## Wines and their conditions

Wine	Condition
Pinot Noir	<ul style="list-style-type: none"><li>- Alone at home</li><li>- Recovering from work</li></ul>
Zinfandel or Shiraz	<ul style="list-style-type: none"><li>- Alone at home</li><li>- Not Recovering from work</li><li>- Getting Drunk</li></ul>
Sangiovese or Grenache	<ul style="list-style-type: none"><li>- Alone at home</li><li>- Not Recovering from work</li><li>- Not Getting Drunk</li><li>- Feeling Fancy</li></ul>
Sauvignon Blanc	<ul style="list-style-type: none"><li>- Using wine for cooking</li></ul>
Sangiovese or Grenache	<ul style="list-style-type: none"><li>- Dinner</li></ul>
Cotes Du Rhune	<ul style="list-style-type: none"><li>- Going out to a restaurant</li><li>- Fancy place</li><li>- Hard to even read the menu</li></ul>
Bordeaux or Burgundy	<ul style="list-style-type: none"><li>- Going to a restaurant</li><li>- Not so Fancy place</li></ul>
Riesling or Chenin Blanc	<ul style="list-style-type: none"><li>- Special occasion: Birthday</li></ul>
California Pinot Noir	<ul style="list-style-type: none"><li>- Special occasion: Anniversary</li></ul>
Spanish Cava	<ul style="list-style-type: none"><li>- Special occasion: New Year</li></ul>
Single Serve Box Wine	<ul style="list-style-type: none"><li>- Camping or Drinking in Public</li></ul>
Argentinian Malbec	<ul style="list-style-type: none"><li>- Alone at home</li><li>- Daily drinking Wine</li><li>- Kool aid Man</li></ul>
Chignon or Bourgeois	<ul style="list-style-type: none"><li>- Eat dirt as a child?</li></ul>
Buttery Chardonnay	<ul style="list-style-type: none"><li>- Buttery in taste</li></ul>

## Test Cases

### Rule 1

IF are\_you\_home = YES  
AND are\_you\_alone = YES  
AND recover\_from\_work = YES  
Then PINOT NOIR

```
Jess> (batch wine.clp)
Are you at home? [Answer: YES/NO]
YES
Are you alone? [Answer: YES/NO]
NO
Is the wine the main course? [Answer: YES/NO]
YES
SANGIOVESE or GRENACHE [go for something exotic...]
```

### Rule 2

IF are\_you\_home = YES  
AND are\_you\_alone = NO  
AND Wine with Main course = YES  
Then SANGIOVESE or GRENACHE

```
Jess> (batch wine.clp)
Are you at home? [Answer: YES/NO]
YES
Are you alone? [Answer: YES/NO]
YES
Recovering from work? [Answer: YES/NO]
YES
The best choice is: PINOT NOIR [sniff your glass off]
```

### Rule 3

IF are\_you\_home = NO  
AND Restaurant  
AND Fancy = YES  
AND Can you pronounce the menu = YES  
You should go for Borduex or Burgandy

```

Jess> (batch wine.clp)
Are you at home? [Answer: YES/NO]
NO
SELECT one of the option:
DINNER: TYPE 'D'
RESTAURANT: TYPE 'R'
CAMPING: TYPE 'C'
DRINKING IN PUBLIC: TYPE 'P'
SPECIAL OCCASIONS: TYPE 'S'
-----
R
Fancy? [Answer: YES/NO]
YES
Can you pronounce the menu? [Answer: YES/NO]
YES
You should go for Borduex or Burgandy

```

#### Rule 4

IF are\_you\_home = NO  
 AND Camping or Drinking in Public  
 Then SINGLE SERVE BOX WINE

```

Jess> (batch wine.clp)
Are you at home? [Answer: YES/NO]
NO
SELECT one of the option:
DINNER: TYPE 'D'
RESTAURANT: TYPE 'R'
CAMPING: TYPE 'C'
DRINKING IN PUBLIC: TYPE 'P'
SPECIAL OCCASIONS: TYPE 'S'
-----
P
You should buy Single Serve Box Wine

```

#### Rule 5

IF are\_you\_home = NO  
 AND Special Occasion  
 AND occasion = Birthday  
 Then RIESLING or CHENIN BLANC

```

Jess> (batch wine.clp)
Are you at home? [Answer: YES/NO]
NO
SELECT one of the option:
DINNER: TYPE 'D'
RESTAURANT: TYPE 'R'
CAMPING: TYPE 'C'
DRINKING IN PUBLIC: TYPE 'P'
SPECIAL OCCASIONS: TYPE 'S'
-----
S
TYPE special occasion:
BIRTHDAY: B
ANNIVERSARY: A
NEW YEAR: N
B
You can drink Riesling or Chenin Blanc (Something Swift)

```

### Rule 6

IF are\_you\_home = YES  
 AND are\_you\_alone = YES  
 AND recover\_from\_work = NO  
 AND getting\_drunk = Yes  
 Then ZINFANDEL or SHIRAZ

```

Jess> (batch wine.clp)
Are you at home? [Answer: YES/NO]
YES
Are you alone? [Answer: YES/NO]
YES
Recovering from work? [Answer: YES/NO]
NO
Getting drunk? [Answer: YES/NO]
YES
The best choice is: ZINFANDEL or SHIRAZ [go for high octane]

```

### Summary

The wine recommender system can educate you as to what wine can be bought in most situations.

### Resources

Blog entailing the different wine choices upon which the rule based recommender system was built:

<https://www.thrillist.com/drink/nation/best-types-of-wine-for-every-occasion>