INFO6540
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The Ontology of Wine

Introduction

The wine has so many various kinds that are interesting to keep digging. Also, the same Vintage always shows different taste depending on grape varietal and year. This is why I chose wine as the subject of Ontology. Wine terms in the ontology were made by referring to the MyNSLC website (https://www.mynslc.com/Products/Wine). Definitions and references added to each term under annotation screen.

Class Hierarchy

The wine ontology is classed by wine type, colour, flavour, taste, sweetness, and country.

WineType

- Dessert_Wine
  - Red_Blend
  - Semillon
  - Touriga_Nacional
  - White_Blend
- Fruit_Wine
  - Apple
  - Blend
  - Blueberry
  - Cherry
  - Cranberry
  - Fruit
  - Honey
  - Peach
  - Pear
  - Raspberry
  - Strawberry
- Red_Wine
  - Barbera
  - Blend
  - Cabernet_Franc
  - Cabernet_Sauvignon
  - Carmenere
  - Corvina

- Gamay
- Grenache
- Malbec
- Merlot
- Montepulciano
- Petite_Sirah
- Pinot_Noir
- Pinotage
- Primitivo
- Sangiovese
- Shiraz
- Syrah
- Tempranillo
- Touriga_Nacional
- Zinfandel

Sparkling_Wine

- Chardonnay
- Glera
- Pinot_Noir

White_Wine

- Chardonnay
- Chenin_Blanc
- Moscato
- Muscat
- Pinot_Gris
- Riesling
- Sauvignon_Blanc
- Semillon
- Viognier

Colour

- Dark_colour
- Light_colour

Flavour

- Apple_Flavour
- Black_Cherry_Flavour
- Black_Fruit_Flavour
- Blackberry_Flavour
- Blackcurrent_Flavour
- Blueberry_Flavour
- Cassis_Flavour
- Cedar_Flavour
- Cherry_Flavour
- Chocolate_Flavour

Citrus_Flavour
Coffee_Flavour
Crisp_Flavour
Dried_Fruit_Flavour
Earthy_Flavour
Floral_Flavour
Fresh_Bread_Flavour
Grape_Flavour
Herb_Flavour
Honey_Flavour
Jammy_Flavour
Lime_Flavour
Liquorice_Flavour
Lively_Flavour
Melon_Flavour
Mineral_Flavour
Mint_Flavour
Mocha_Flavour
Orchard_Fruit_Flavour
Peach_Flavour
Pear_Flavour
Pepper_Flavour
Plum_Flavour
Raspberry_Flavour
Red_Berry_Flavour
Red_Fruit_Flavour
Smoky_Flavour
Spice_Flavour
Strawberry_Flavour
Tobacco_Flavour
Tropical_Flavour
Vanilla_Flavour
Violet_Flavour

Taste_Profile

Aromatic_&_Vibrant
Bold_&_Full
Bold_&_Full_Flavoured
Crisp_&_Light
Light_&_Fruity
Rich_&_Full
Smooth_&_Medium

Wine_Sweetness

Dry

Medium
Medium_Dry
Sweet
Very_Dry
Very_Sweet

Country

Argentina
Australia
Canada
Chile
France
Germany
Greece
Hungary
Italy
New_Zealand
Portugal
South_Africa
Spain
USA

Object Properties

Due to a large number of wine species (grape varietal), I limited to the bestselling wines on MyNSLC website. I created object properties to define relationships among each class. (e.g., "has_colour," "has_flavour," "has_sweetness," "has_taste," "produces_wine")

Mostly this wine ontology's Domain is "WineType," and ranges are "Colour," "Flavour," "Taste_Profile," and "Wine_Sweetness." For instance,

"Malbec" "has_colour" "Dark_colour"

The Domain of "has_colour" is "WineType", and Range is "Colour." The other object properties, except "produce_wine," relate to the same relationships, such as,

"Sauvignon_Blanc" "has_flavour" " Citrus_Flavour"

> “WineType” as a domain, “Flavour” its range.

One exception is “produces_wine” object properties. In this case, “WineType” is range and “Country” is the domain. The example is below.

“USA” ”produce_wine” ” Petite_Sirah”