WINE-O.AI: Computer Vision Assisted Wine Recommendations

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Ending Wine Ruts with Computer Vision

Goal: Wine-label based database and recommendation system
Data Retrieval & Processing Pipeline

1. Scraped 50K Wine Labels & Reviews
2. Detection of Features with SIFT
3. Feature Clustering & Inverted Index
4. Image Alignment with RANSAC
5. Recommendation System & Application
Teaching Computers to See

Scale Invariant Feature Transformation (SIFT)

Random Sample Consensus (RANSAC)
Fingerprinting for Fast Retrieval

Wine

Clusters
Fingerprinting for Fast Retrieval

Inverted Index

Wine

Clusters

Clustering

Computer Vision

Data & Pipeline

Clustering

Image Retrieval

Application
Educated Guess
× (NAPA VALLEY + 2009)
CABERNET SAUVIGNON
WINE-O.AI Demo

Select or Drop Your Wine Label

Select Label  Search
WINE-O.AI Demo

WINE-O.AI: Imbibe Intelligently

Wine Information

Educated Guess
Cabernet Sauvignon
2009
Roots Run Deep Winery
Napa Valley, CA

Rating
90% Wine Advocate

Review
This Napa Cab will certainly delight a bargain hunter, especially knowing a good portion of the fruit is sourced from a Beckstoffer vineyard. Surprising complexity for a bottle that runs $25 or less—the hallmarks of high end Napa fruit are here. Boysenberry envelopes the palate with just a hint of oak. Dark hued, young tannins and well balanced.

Wines You May Love
- Sweetwater Ranch, 2009 Cabernet Sauvignon, Levendi Winery, Napa Valley, CA
- Gaba do Xil, 2011 Mencia, Telmo Rodriguez, Spain
- Smith & Hook, 2013 Cabernet Sauvignon, Hahn Family Wines, Soledad, CA

Wine Label

Winery Location

Purchase Nearby

Columbus Wines & Spirits
730 Columbus Avenue
New York, NY 10025

by Michele L. Giff
Conclusions

• Accurate fingerprinting of wine labels achieved using computer vision and machine learning
• Search and recommendation engines implemented in web application
• Foundation of mobile application and wine cataloging system

WINE-O.AI: Imbibe Intelligently
Thank you!

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