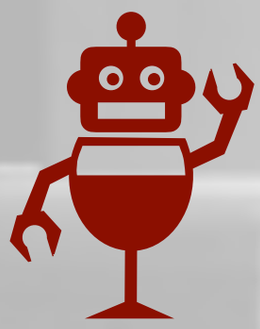
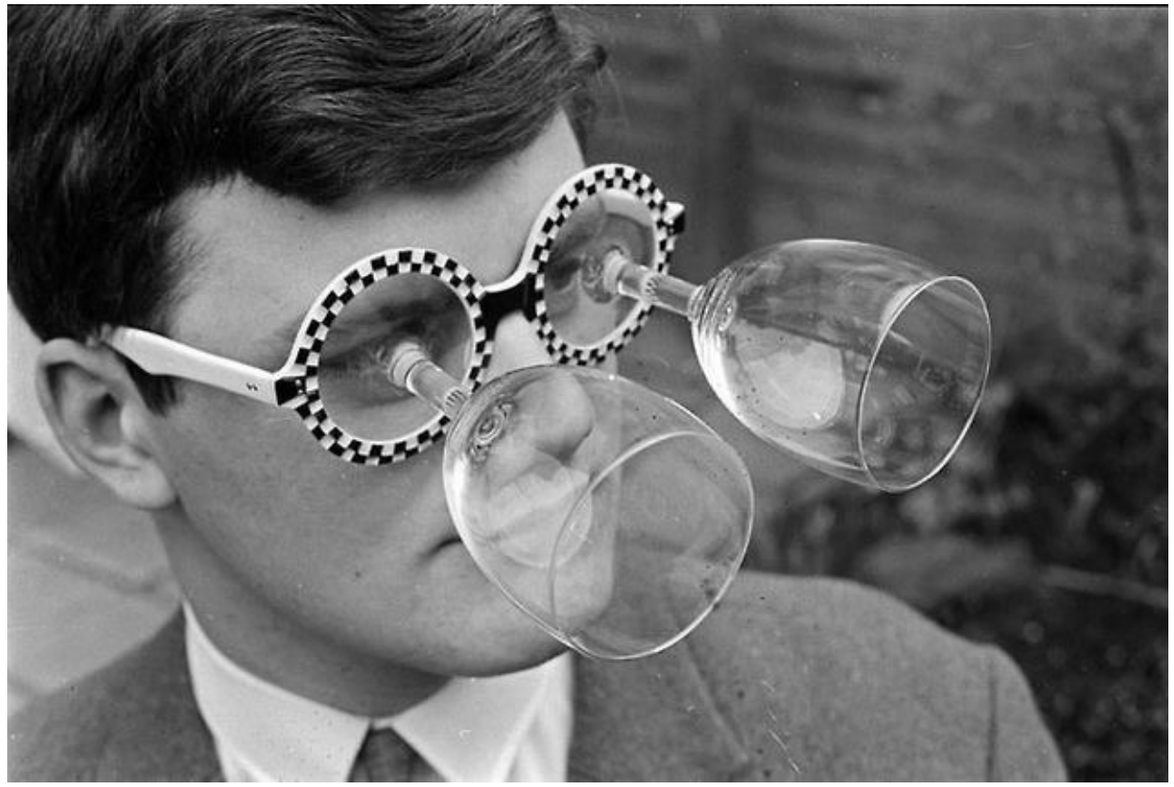


WINE-O.AI: Computer Vision Assisted Wine Recommendations

Michelle L. Gill, Ph.D.

September 15, 2016

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

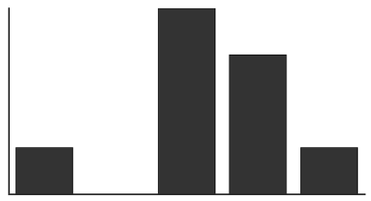
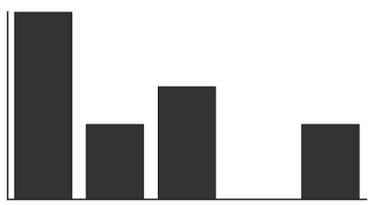
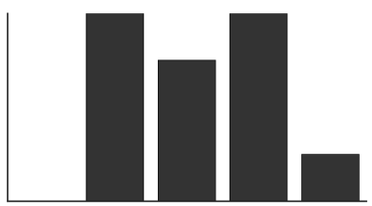
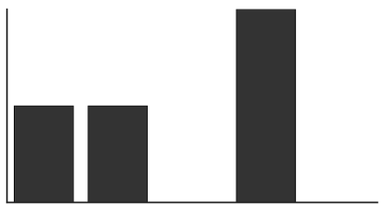
5. Recommendation System & Application

Teaching Computers to See

Scale Invariant Feature Transformation (SIFT)

Random Sample Consensus (RANSAC)

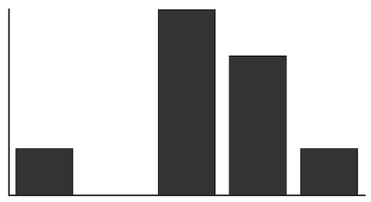
Fingerprinting for Fast Retrieval

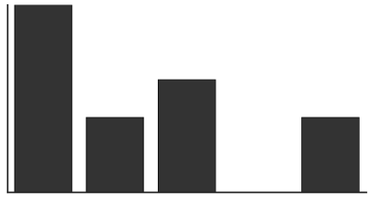
Wine	Clusters
	
	
	
	

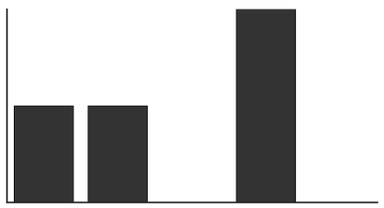
Fingerprinting for Fast Retrieval

Wine

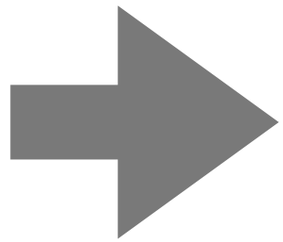
Clusters







Inverted Index



Clusters **Wine**

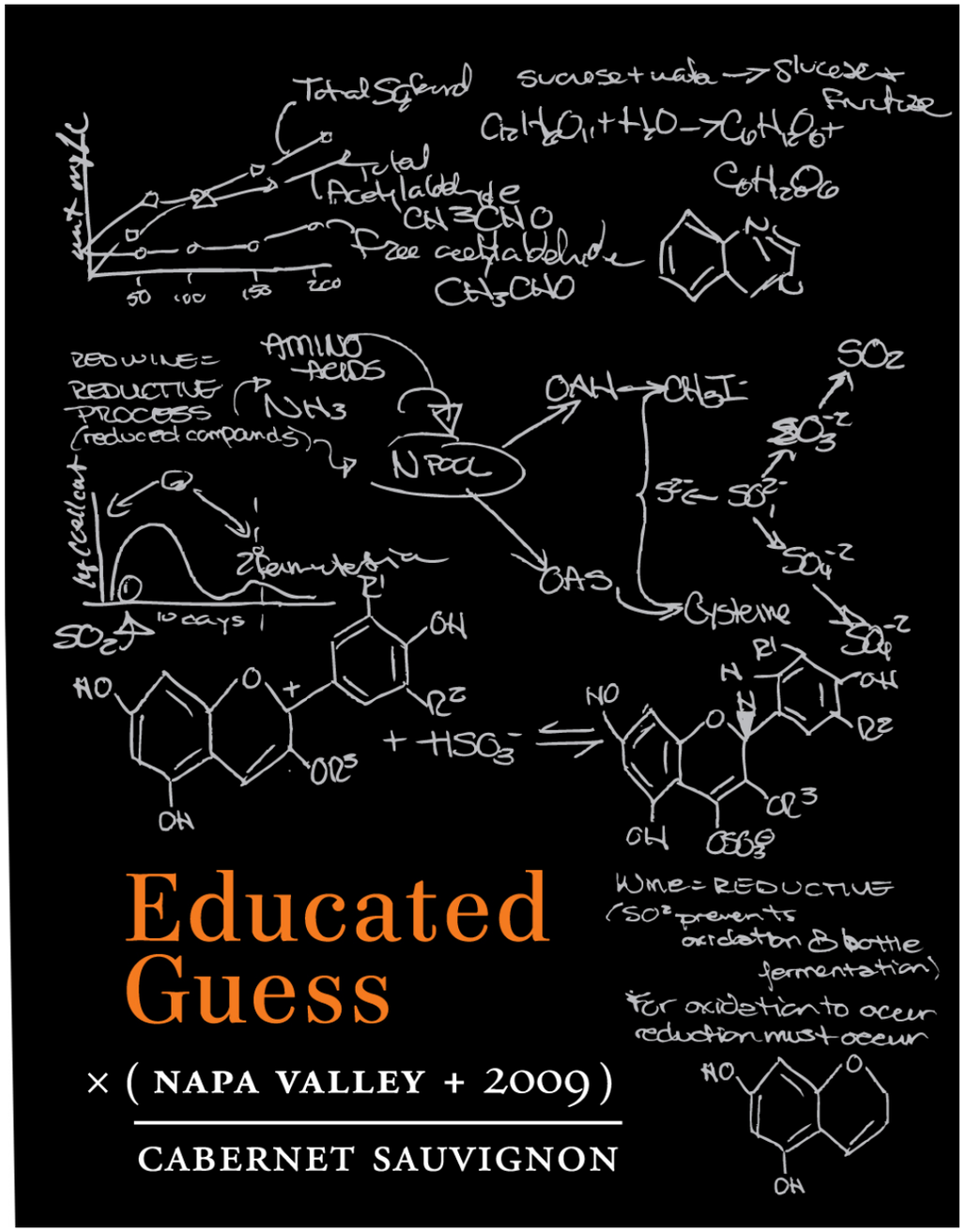
0

1

2

3

WINE-O.AI Demo



WINE-O.AI Demo

WINE-O.AI Demo

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

Thank you!

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