Visual Search Interface for Wine

CS294 Visualization Final Project
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Motivation

• Visual search interfaces allow users to visually identify their search queries as opposed to lists generated from standard search engines

• Lists do not scale well to the number of items, bias items at the top (or bottom).
Motivation

from wine.com

from winelibrary.com
Related Work
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• Ahlberg and Shneiderman. Visual information seeking: Tight coupling of dynamic query filters with starfield displays.


• Xuan, et al. An Active Visual Search Interface for Medline.

Step 1: Describe what you’re looking for

- Tannins
- Acidity
- Fruit Content
- Dryness
- Price Point
Step 2: Locate your query in the space

What you’re looking for
Step 3: Find a wine you like

What you're looking for

A close match

What you're looking for
Step 4: Explore the space

Your search
Technical Challenges

- Projection and dimensionality reduction
- Canonical Correlation Analysis
- Textual Data
  - Topic modeling and featurization
- Quantitative data
- Building the interface
- Evaluating the interface
Technical Challenges
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Contributions

• Visual search of items through dimensionality reduction. Items are assumed to have textual descriptions and/or quantitative data associated

• Topic modeling and featurization of text within the dimensionality reduction
Milestones

• Establish dataset
• Vintage Berkeley data, scrape, or email
• Analyze text
• Find a topic model (LDA, HDP-LDA, nested CRP, tf-idf, pLSI, LSI, manually)
• Translate model into a featurization function
• Establish a evaluation function for projection
• User study