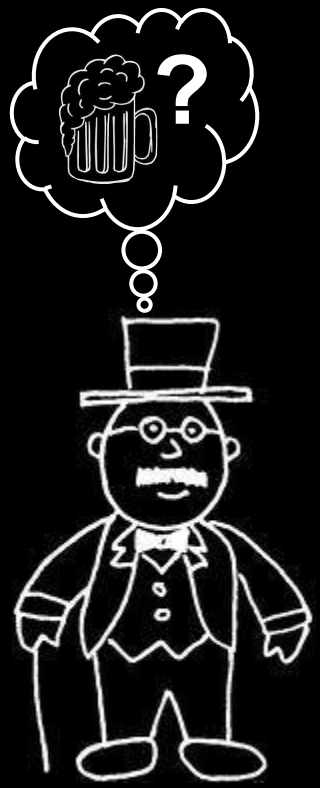
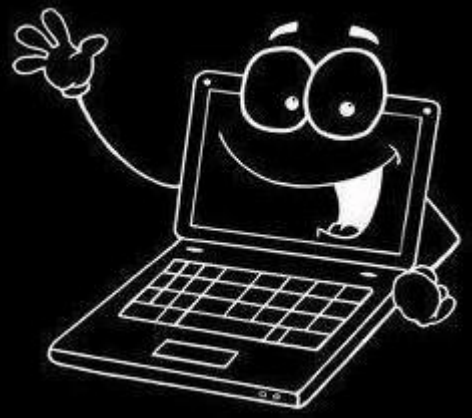
Problem: It can be hard to get good craft beer recommendations

Solution: BeerInsight

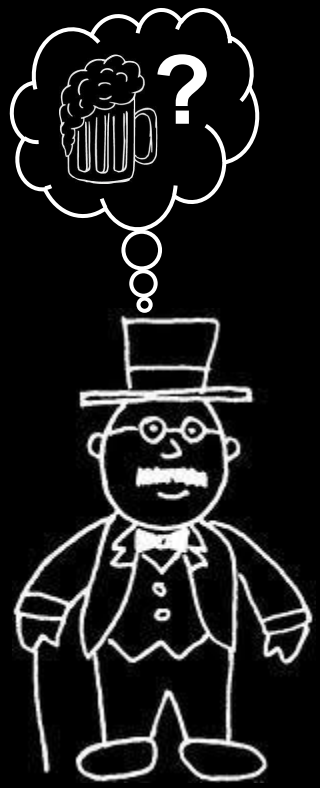
Alex Tronchin-James

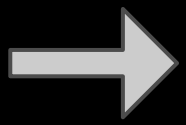


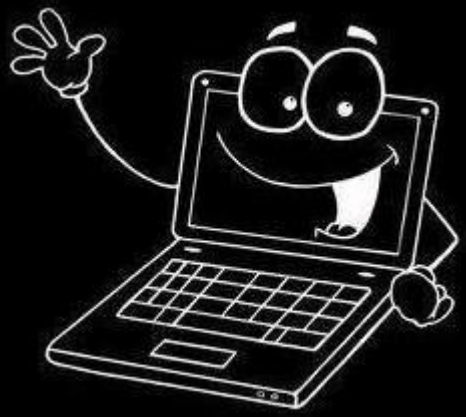


INSIGHT

user reviews





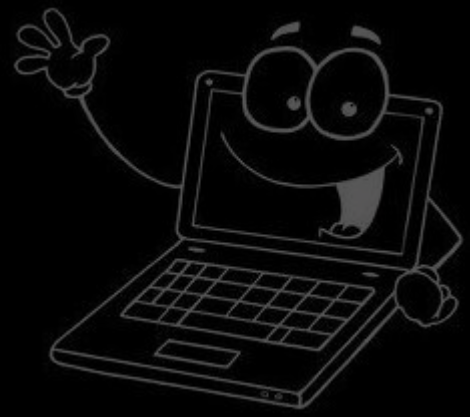


other user reviews

Beeradvocate™

SQLite

user reviews



other user reviews

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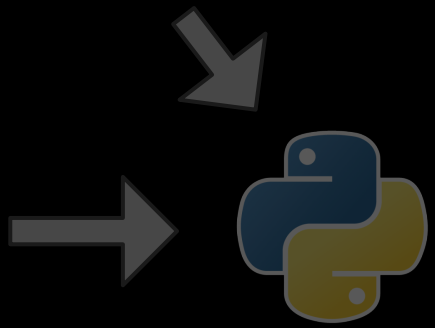
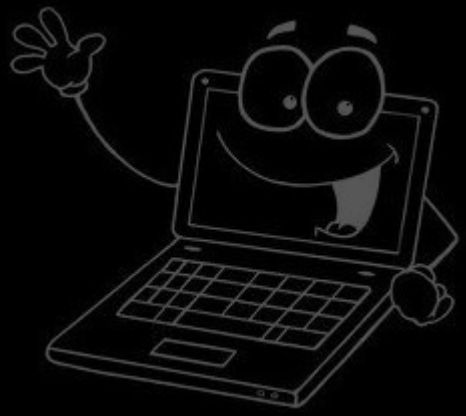


Cython



collaborative filtering recommender system

Alex Tronchin-James, Insight 2013

The recommender is trained using the BeerAdvocate.com database

- Obtained from a friendly blogger (thanks!)
- 1,586,614 reviews, text, 1-10 star ratings
- 56,857 unique beers
- 33,388 unique users

- After tuning regularization and number of features
  - training error of 0.89 stars
  - validation error of 0.97 stars

Home-brew collaborative filtering

- regularized least squares linear regression with L-BFGS optimization
- 

used to return a sparse component of an otherwise dense matrix multiplication

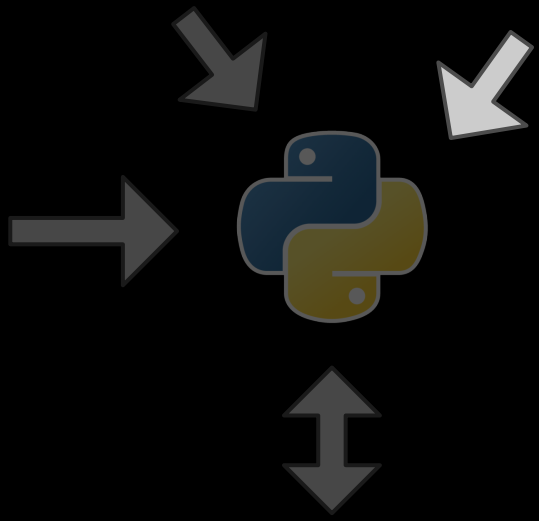
$$< X\Theta^T, R >= Y$$

- **pull request** in progress to include this to 

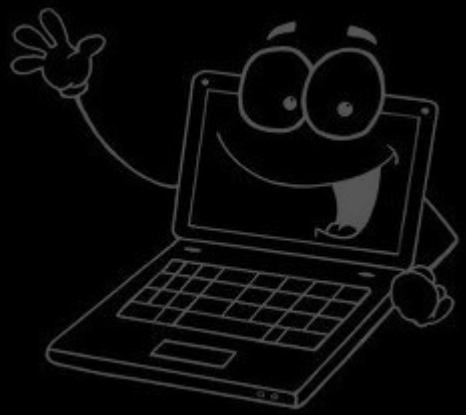
other user reviews

location data

user reviews



collaborative filtering
recommender system



Filter results by location data scraped from RateBeer.com

- Names differ between databases

```
(48, u'Port Brewing/Lost Abbey|Port Brewing High Tide  Fresh Hop IPA')
(46938, u'Port Brewing Company / Pizza Port|High Tide Fresh Hop IPA')
```

- … but can be matched by **n-gram similarity**
- mismatches are easy to **clean**

other user reviews

Beeradvocate

SQLite

location data

ratebeer

Requests

front end

HTML CSS

JavaScript

jQuery
write less, do more.

user reviews

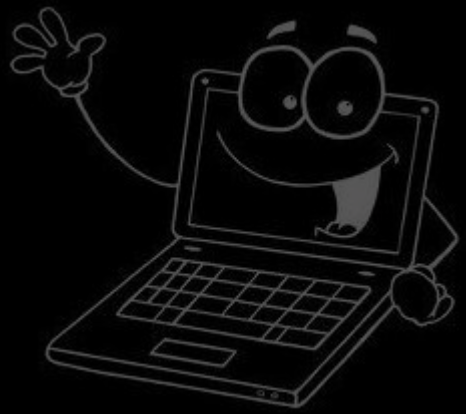
Flask
web development, one drop at a time

twistd

powered by amazon web services™

Cython

collaborative filtering
recommender system



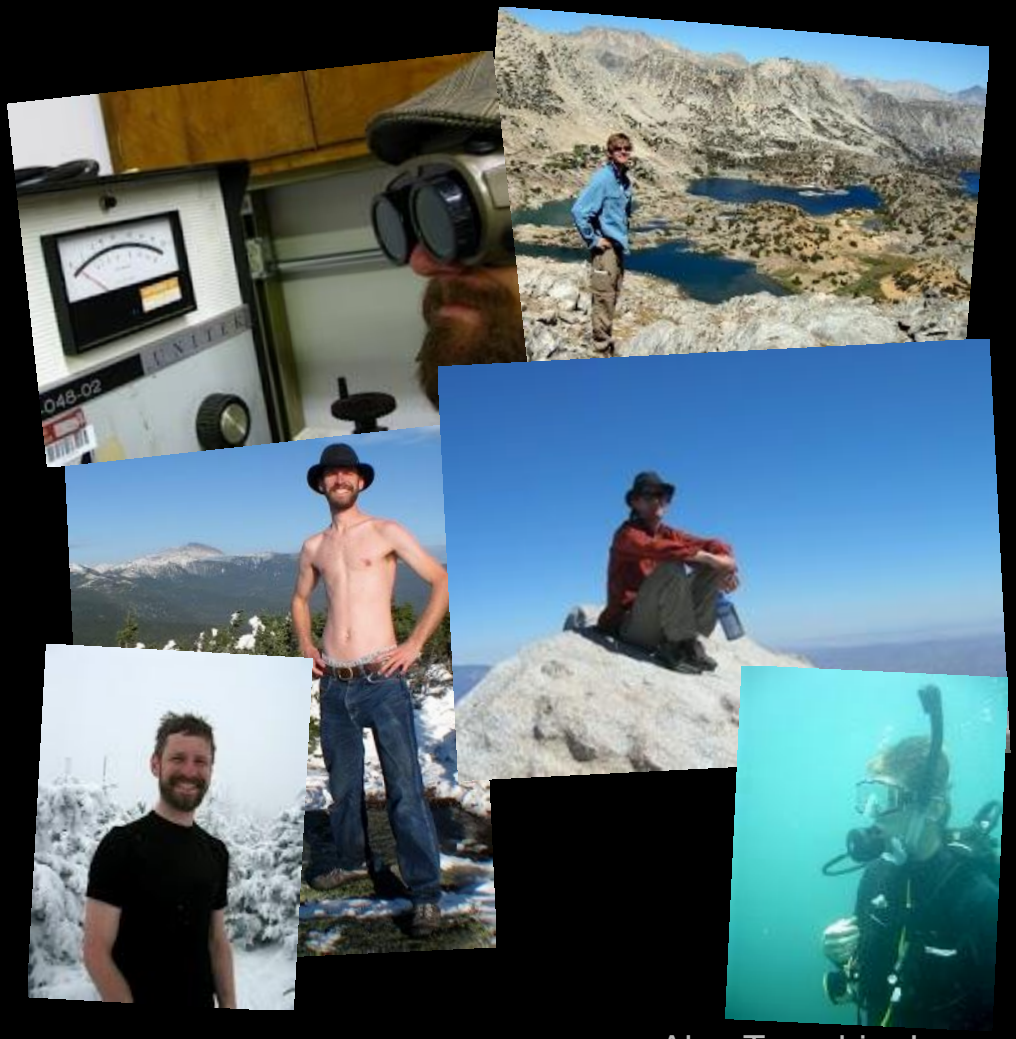
Alex Tronchin-James, Insight 2013

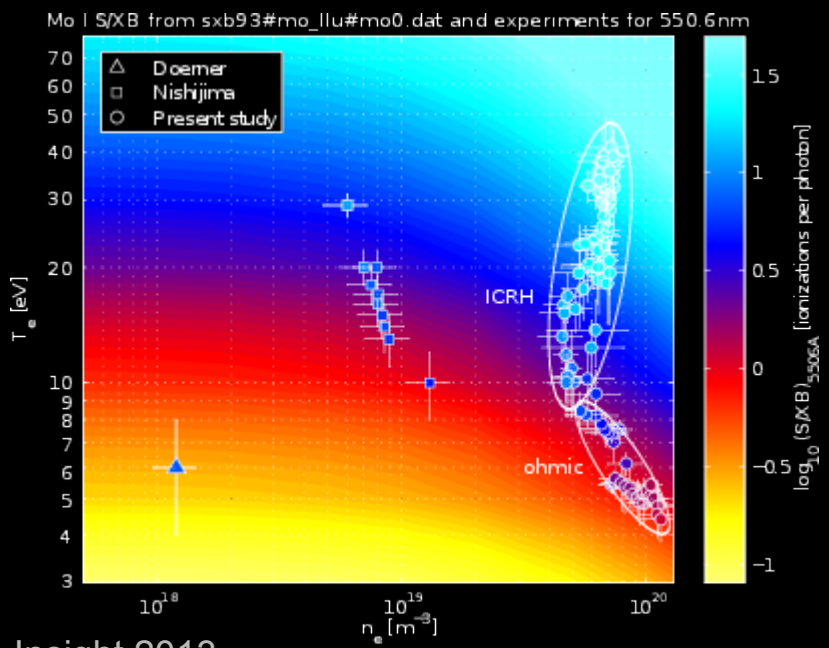
About me

Alex Tronchin-James

UCSD Jacobs

MIT





Tuning and validation

- Applying learning curves to tune number of features and regularization parameter

  … TODO