what is DonorsChoose.org ?
Teachers ask. You choose.

- non-profit organization
- public school teachers propose classroom projects
- itemized donations

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Zipfian Academy

supply gap

On DonorsChoose.org,

- 50,000 schools
- 10,000 districts
- 600,000 projects

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supply gap

On DonorsChoose.org,
- 50,000 schools
- 10,000 districts
- 600,000 projects

(100,000 schools In the U.S.)

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supply gap

what is the problem?

- small population of active schools

90% of all school districts on DonorsChoose.org have less than 3 projects/year

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goal

leverage education statistics and economic data to help increase the supply of projects on DonorsChoose.org

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data

- project data from DonorsChoose.org
- school district revenue from the National Center for Education Statistics (NCES)
- district-level U.S. Census economic data

Zipfian
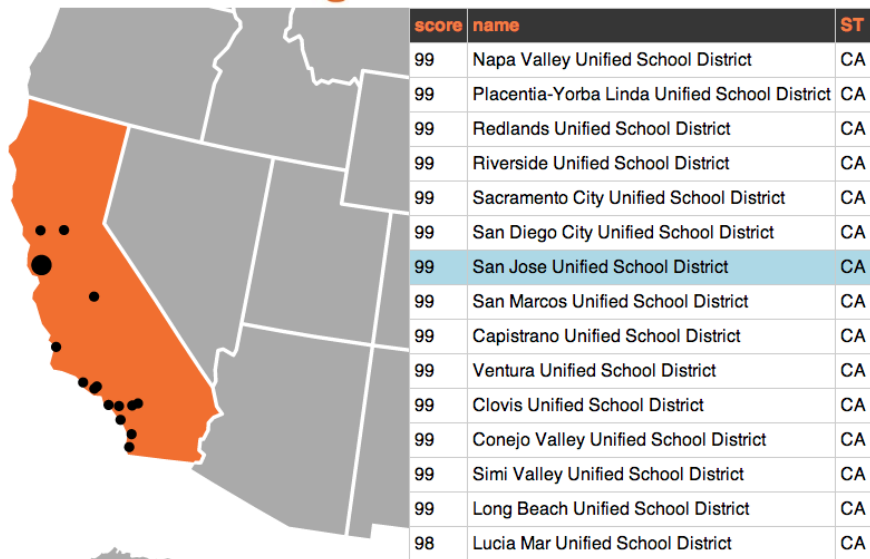Academy

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methods

- classification
  - logistic regression and random forest
  - feature importance
- cosine-similarity recommender
  - rank by RMS of the cosine-similarity
  - normalize
  - => metric used to rank potential districts

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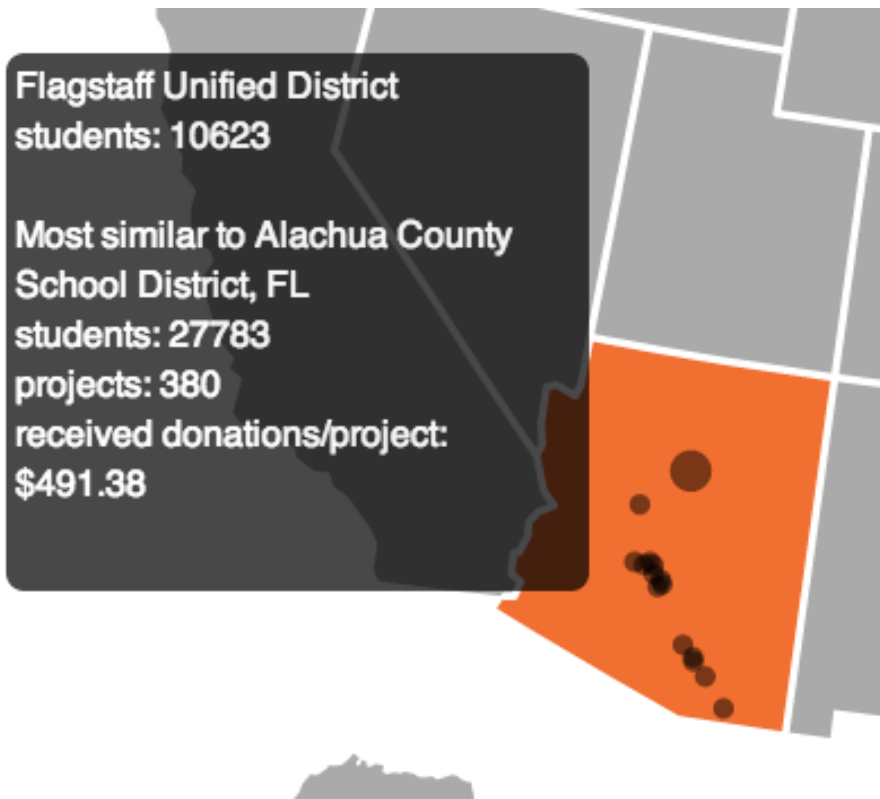
Zipfian Academy

results

- interactive d3.js visualization
  - explore district recommendations
  - highlight district potential
  - platform to help DonorsChoose.org with their outreach efforts

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results

Mind The Supply Gap on DonorsChoose.org
finding school districts that have some serious potential

score	name	ST
99	Napa Valley Unified School District	CA
99	Placentia-Yorba Linda Unified School District	CA
99	Redlands Unified School District	CA
99	Riverside Unified School District	CA
99	Sacramento City Unified School District	CA
99	San Diego City Unified School District	CA
99	San Jose Unified School District	CA
99	San Marcos Unified School District	CA
99	Capistrano Unified School District	CA
99	Ventura Unified School District	CA
99	Clovis Unified School District	CA
99	Conejo Valley Unified School District	CA
99	Simi Valley Unified School District	CA
99	Long Beach Unified School District	CA
98	Lucia Mar Unified School District	CA

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results

Flagstaff Unified District
students: 10623

Most similar to Alachua County
School District, FL
students: 27783
projects: 380
received donations/project:
$491.38

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next steps

- further develop interactive tool
  - recommend potential schools
  - recommend projects given similarity
- improve recommendation
  - clustering techniques
  - regression/classification

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thanks!

DonorsChoose.org
Teachers ask. You choose.

interactive visualization on:
abshinn.github.io/mind-the-gap

code available on:
github.com/abshinn

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