TDA Challenge

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Overview

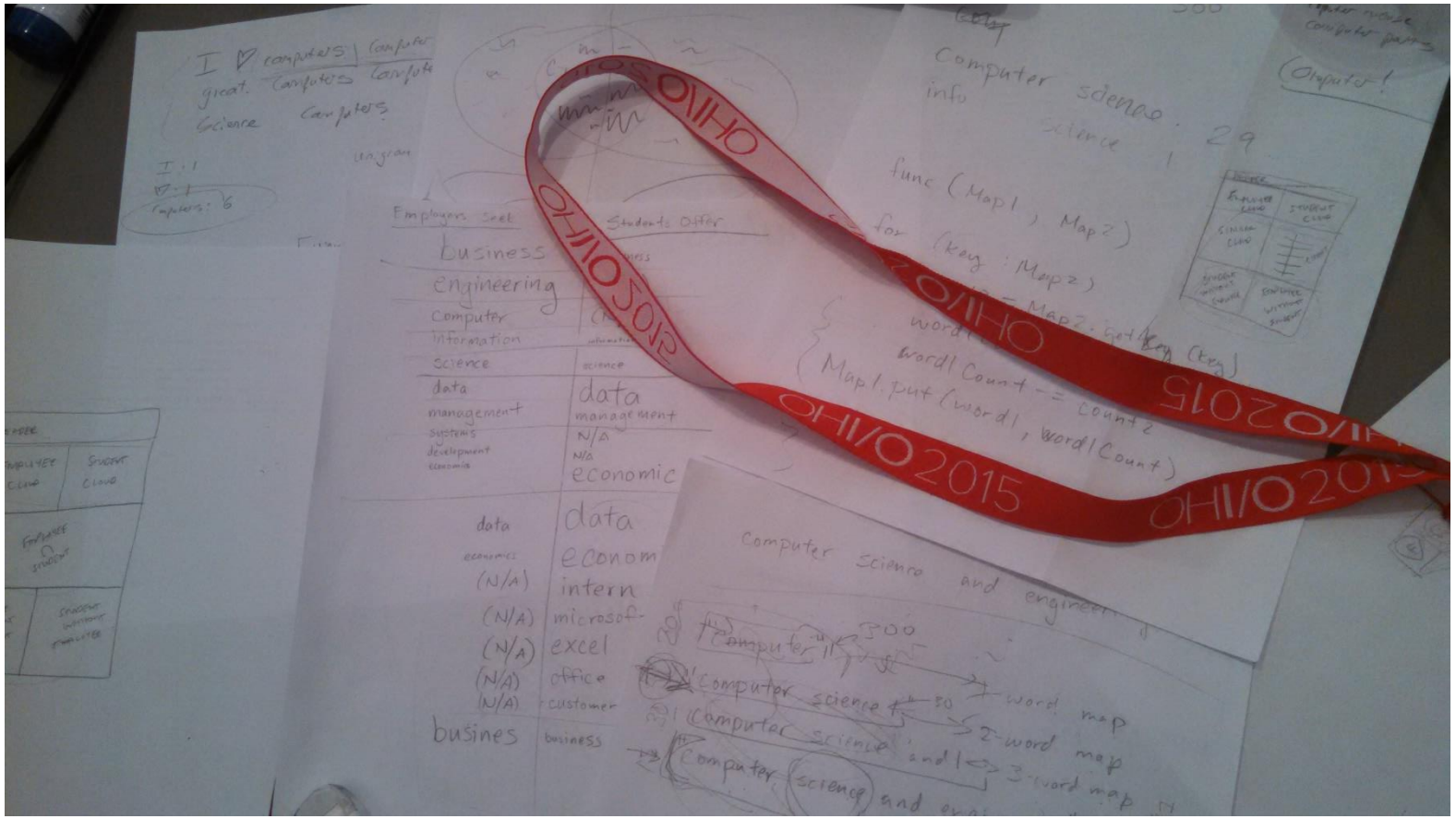
* Challenge
* Strategy
* Implementation
* Raw Results
* Discussion
* Recommendations

Challenge

* Have:
  * Job descriptions
  * Résumés
* Want:
  * **Creative** visualizations of similarities and differences
  * Recommendations to decrease inconsistencies

Strategy

* Parse data from any text files to obtain
  * Word frequency
  * 2-word phrase frequency
  * 3-word phrase frequency
  * 4-word phrase frequency
* Exclude irrelevant words (e.g. “in”, “skills”, “4”)
* Normalize frequencies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Employers Seek
Students Offer
business
engineering
computer
information
science
data
management
systems
development
economic
data
economic
(N/A)
(N/A)
(N/A)
(N/A)
(N/A)
data
economic
intern
microsoft
excel
office
customer
business
Computer science and engineering
Computer
Computer science
Computer science and
Computer science
word map
2-word map
3-word map
func (Map1, Map2)
for (key : Map2)
Map1.put(word1, word1Count)

Implementation

* Standard Java, Eclipse, HTML, and text file data
* Coded:
  * Custom n-gram counters
    * Suitable for reuse on future job postings and résumés
  * Alphabetical tag cloud generator
  * Similarity chart with novel size-illustration of frequency
* Results displayed on webpage

Raw Results

* Employers seek:
  * Business
  * Engineering
  * Computer
  * Information
  * Science
  * Data
* Students offer:
  * Data
  * Economics
  * Intern
  * Microsoft
  * Excel
  * Office

Discussion

* Level of experience matches
* Majors/minors incongruent in sample data
* Useful courses:
  * Business
  * Engineering
  * Computer Science
  * Computer Information

Recommendations

* Students:
  * tailor and update resume for specific positions
* Employers:
  * "*These are not the droids you're looking for…*"
  * but students in other areas likely match

* Interesting disparity:
  * students offered skills in specific Microsoft Office programs, but employers not interested

Questions?

Thank you from Team Panda-Storm-Pie!