STRIDER Project

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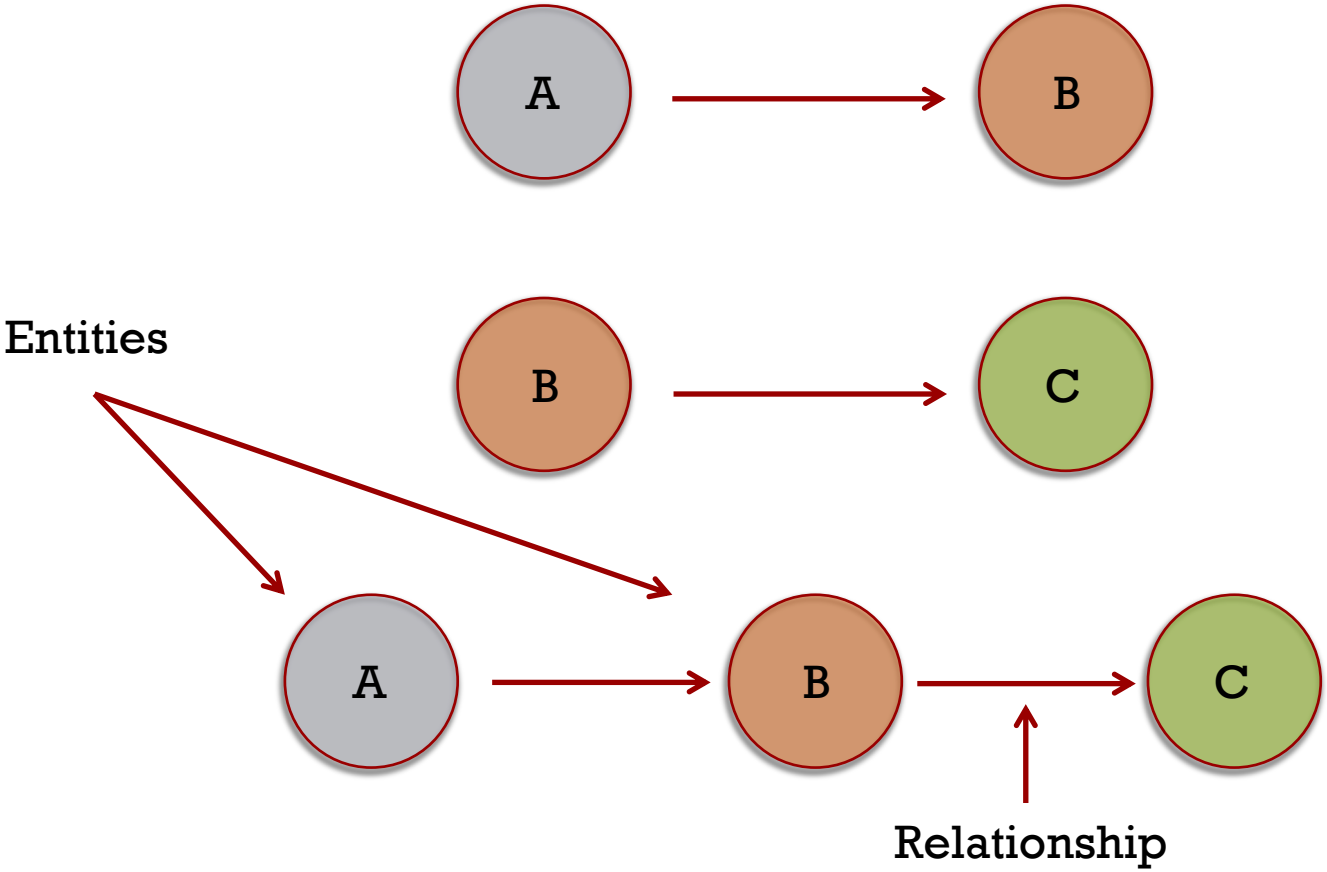
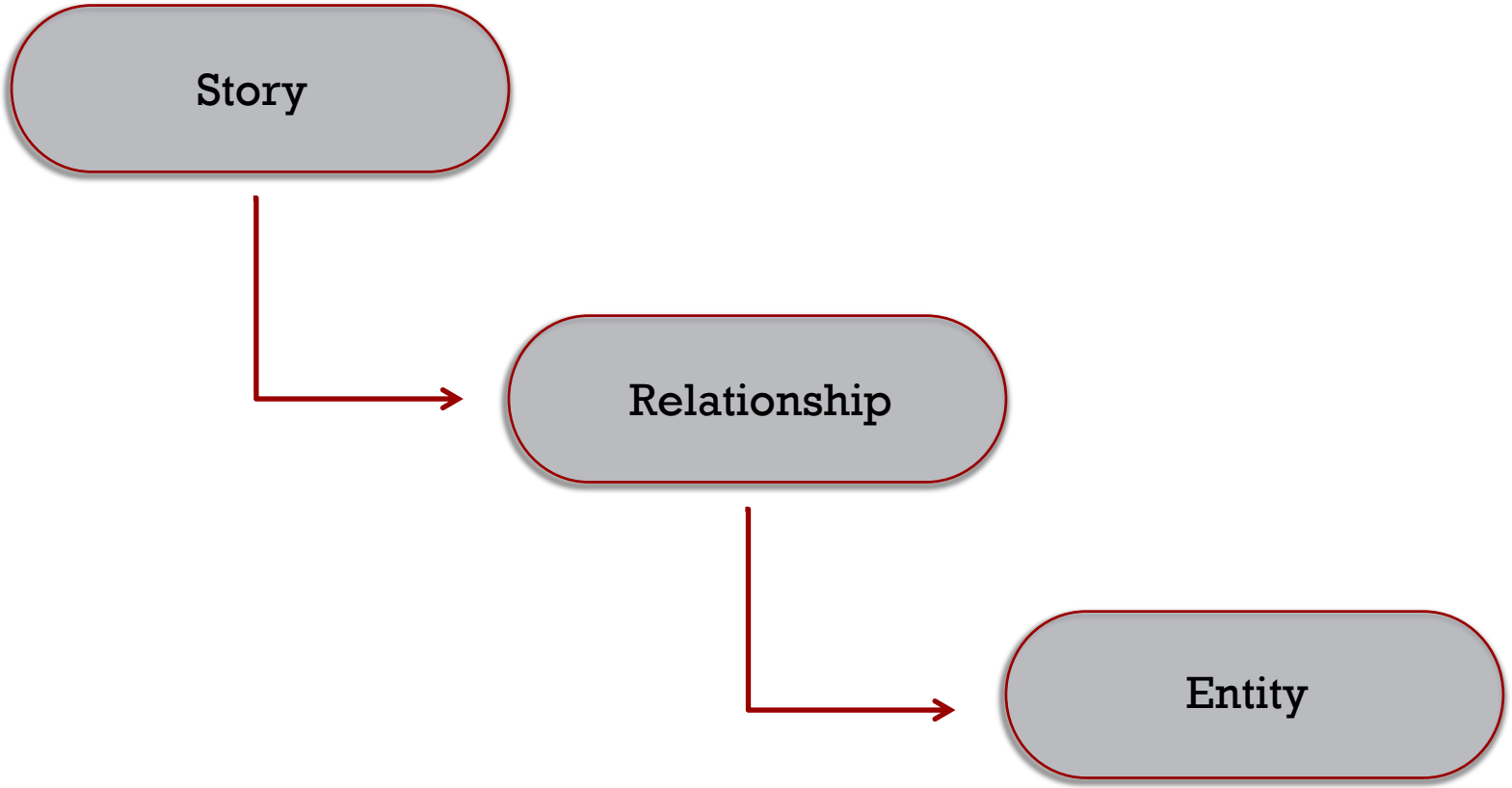
Thomas Jefferson High School Senior

STRIDER Storytelling



Story Hierarchy



Person: ABC

- Tags:
  - ERDC
  - Intern
  - ROTC

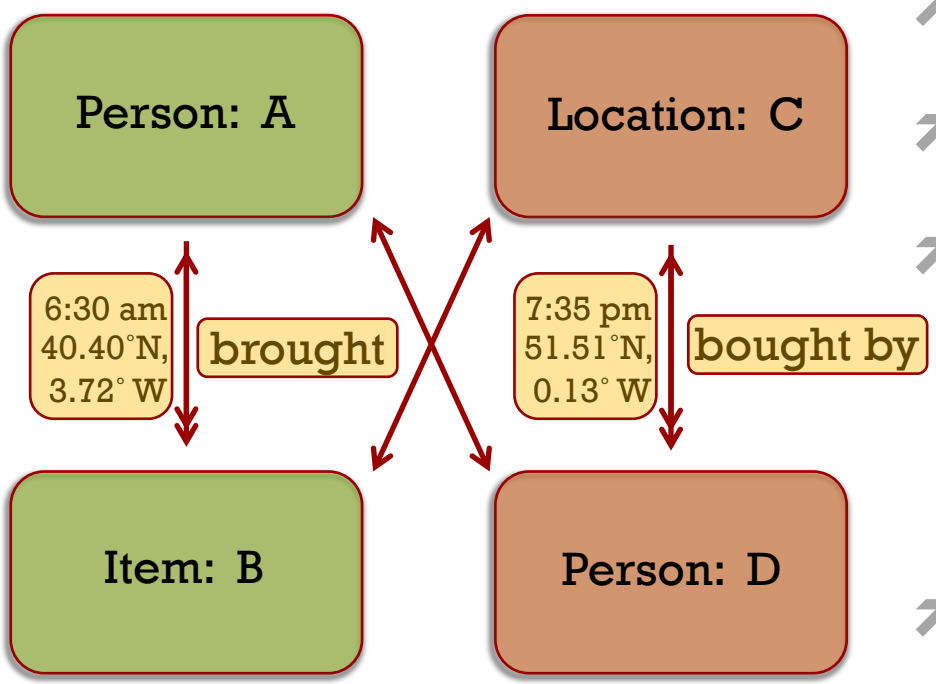
Person: BCD

- Tags:
  - ERDC
  - Army

Entity

Abstract Class
-compareTo(Entity e)

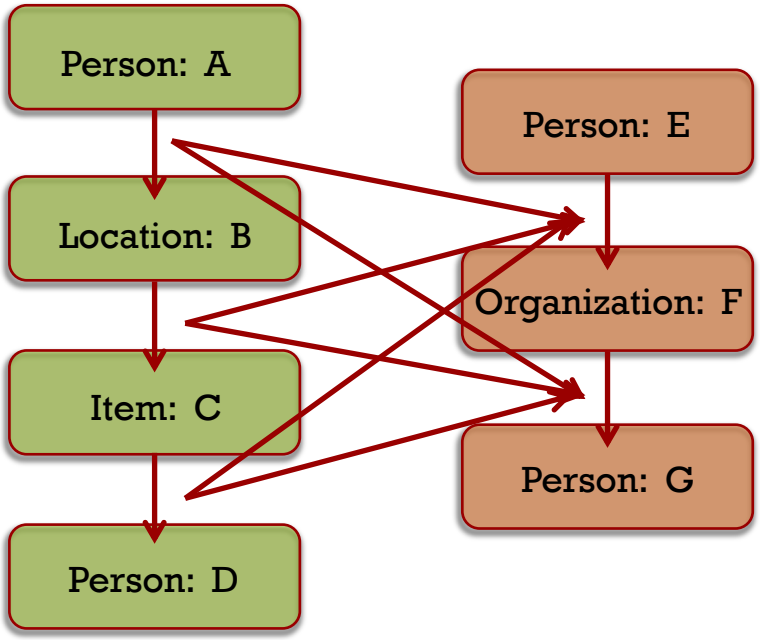
- Implementing subclasses:
  - Person
  - Organization
  - Location
  - Item
- ArrayList<String> Tags
- Comparison:
  - Levenshtein distance
  - Tag similarities



Relationship

Concrete Class
- -compareTo(Entity e)
- -Temporal location
- -Spatial location

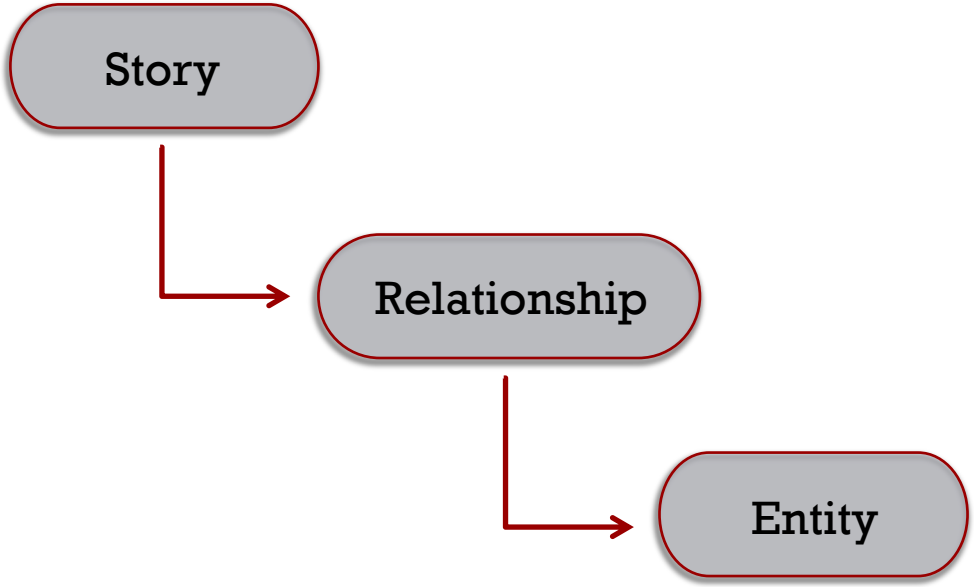
- Knows Entities
- Stores location and time
- Comparison:
  - Entity comparison
  - Levenshtein distance
  - Spatiotemporal distance
- Weighted comparison:
  - Experimentally found
  - Dependent on data size



- Comparison:
  - Relationship comparison
  - Nested for-loop

Story

Concrete Class
- -compareTo(Entity e)
- -Temporal location
- -Spatial location

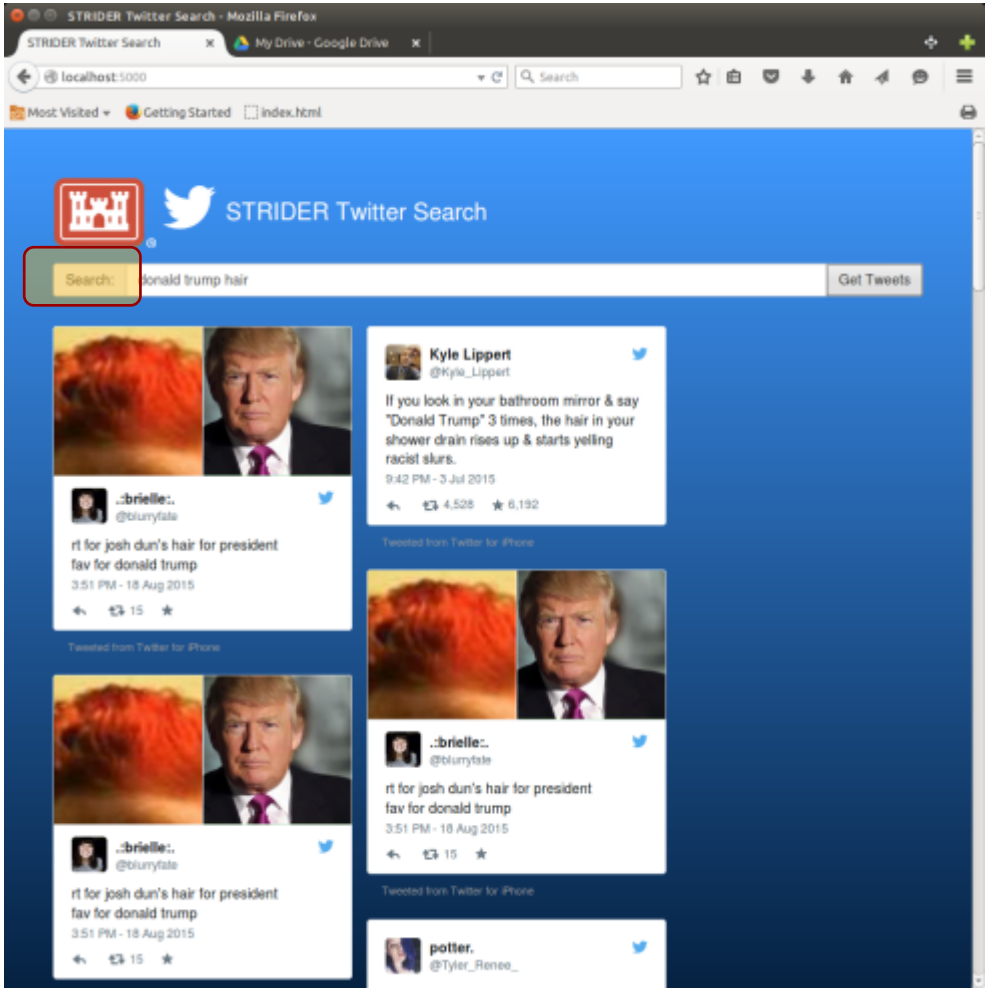


STRIDER Data Collection

- Natural Language Processor (NLP):
  - Twitter statuses
  - News articles
  - Word documents (i.e. Army logs)

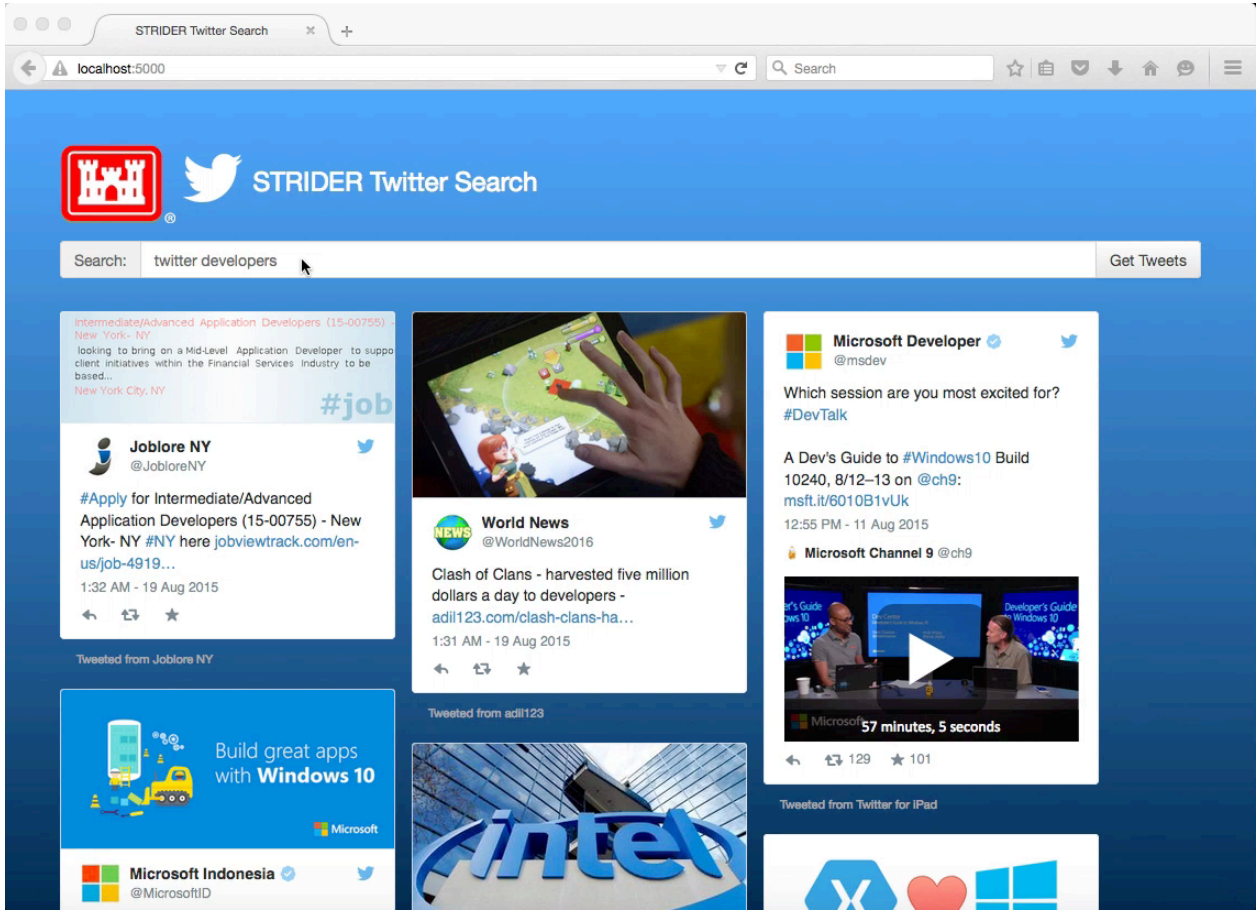
Twitter Demo

Search Bar



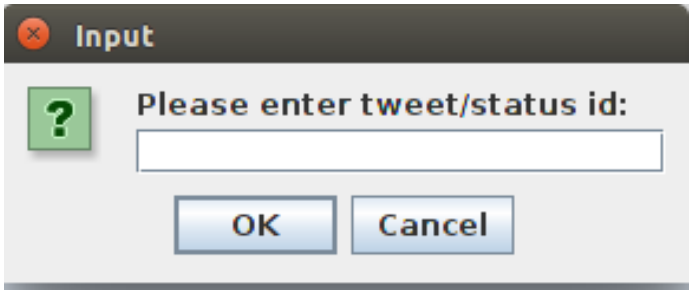
Twitter Demo

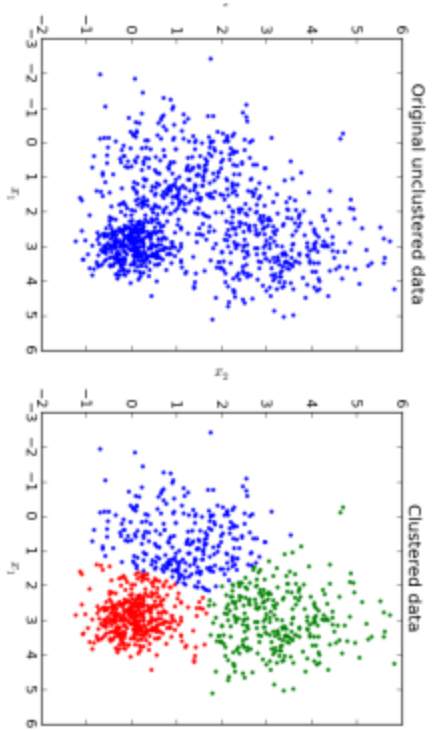
Twitter Demo



STRIDER Retweeter Search

- SignUpPost for API Call Authentication
- Twitter REST API
  - GET status/retweeters
- Output .csv file with user information





K-Means Clustering

-Clustering algorithm

- Used in STRIDER project
- Represent objects as data points
- One of the most common clustering algorithms
- Python 3.0

- Set up my first server: Apache LAMP
- Ran programs on Node JS server
  - Lightweight server
  - Local host

Servers

-Apache LAMP
-Node JS

- Wrote my first C++ program
- Learnt about:
  - User inputs (*cin*)
  - User outputs (*cout*)
  - Memory allocation
  - Memory deletion

C++

-Low level language

- Wrote my first web application in AngularJS
- TwitterWall search demo

AngularJS

-Built on top of Javascript
-Extremely powerful

Future

- Continue working with C++ & AngularJS
- Learn more web development
  - Bootstrap
  - Mobile AngularJS
  - CSS