Flickr IDR

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Overall Goal

- web-based interface
- multi-modal search on Flickr image collections
  - Image
  - Annotation
Project Phases:

- **Phase 1**: gather statistics about educational image groups on Flickr
  - Support need for multimodal search
    - Image-based Image
    - Text-based annotation and metadata

- **Phase 2**: web-based interface and basic search
  - SuperIDR image database only
  - Combine results of two existing search libraries
    - CBISC
      - Images
    - Lucene
      - Text
Project Phases

✓ Phase 3: generalize
  o Support indexing of Flickr image group data to enable multimodal search on it
  o Expand database to include selected Flickr image groups

• Phase 4: Research ways to best utilize multimodal data for search (stretch goal)
  o How to return and organize the best results when multiple modes of search are used

❖ Bonus: Release code as open source
Application

• Web application
  o Selection of image query by upload or by URL (with crop capability)
    • Javascript GUI for responsive user experience
    • Uses Jcrop library
    • Hidden formfields pass data to server
  o Image and text-based search
    • Apache Lucene
      o Commonly-used text-search library
    • CBISC
      o Image search library from UNICAMP Brazil
    • Results are combined based on normalized scores from search libraries and weights given by user
  o Flickr integration
    • User is linked to relevant Flickr image page
    • All images are hosted on Flickr, not search server
Application

• Indexing service
  o Crawls Flickr account or image group
  o Temporarily downloads images to feed to CBISC
  o Forms text data and necessary ID fields into Lucene document
  o Indexes annotations as subimages with CBISC
  o Indexes annotation text with Lucene
  o Annotations are linked to parent image by ID
  o Slow, bandwidth and CPU intensive process
DEMO
Deliverables

• Abstract
• Project Paper
  o Includes
    • Executive Summary
    • User's Manual
    • Developer’s Manual
    • Testing Manual
    • Etc.
• Readme
• Source Code
Challenges

• PHP vs. ASP.net
• Javascript
• Learning new technologies
  o CBISC
    • Sparsely documented
  o Lucene
    • Well-documented
Future work

- Deploy to university server
- Implement further tests
- Improve UI design and subimage searching
  - Display more data on search results page
- Allow for automated indexing of user-specified Flickr groups
- Research effectiveness of image searching on other groups and identify optimal CBISC settings
Questions?