

# Information Storage and Retrieval

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Front-End / User Interface Team

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Blacksburg, VA  
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# Quote of the Day

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- “A picture is worth a thousand words. An interface is worth a thousand pictures”
  - Ben Shneiderman

# Problem Statement

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- Design and implement the front-end of an information retrieval system that allows end users to search tweets and web pages using free text and faceted queries.

# Background

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- Interface
  - A software layer that allows end users to interact with our information retrieval system
- Faceted search
  - A search system that allows us to search documents based on their classification
- Text search
  - A search system that allows us to search for documents using natural language

# Requirements

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- Search Tweets and web pages
- Implement faceted search
- Present user based suggestions
- Present search result based suggestions
- Track user activities
- Allow registered and unregistered users to use the system

# Approach

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- Leverage five of Ben Shneiderman's Eight Golden Rules of Interface Design
  - Cater to universal usability
  - Offer informative feedback
  - Prevent errors
  - Permit easy reversal of actions
  - Reduce short-term memory load
- Create interface on virtual machines and then move to cluster

# Design

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- Created markups on a whiteboard
- Narrowed the options down to two
- Showed the two options to the class
- The class selected one of the two and gave additional input
- Selected Hue because of the large number of features it provided\*

# Technical Challenges

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- Lack of precedent
- Inflexibility of hue
- Django learning curve
- Data stored in incompatible format



# Results

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- Search Tweets and web pages
- Implement faceted search
- ~~Present user based suggestions~~
- Present search result based suggestions\*
- Track user activities\*
- Allow registered and unregistered users to use the system
- Text search
- Visualizations\*

# Future Work

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- Find alternative tool to Hue
- Present user based suggestions
- Finalize presenting search result based suggestions
- Finalize tracking user activities
- Finalize allow registered and unregistered users to use the system
- Finalize visualizations and integrate visualizations from partner teams
- Remove zero valued fields from facets



Demo

# Acknowledgements

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Questions?