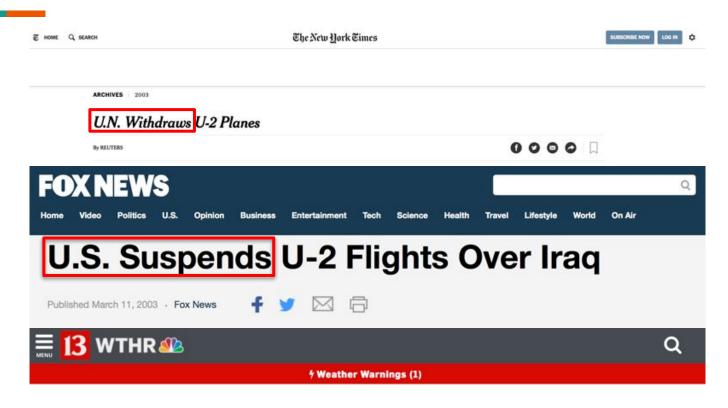
#### **UNBIASED**

Brian Hao, Ricky Chan, Erica Hendricks-Elliston, Phillip Foo CSCI 499 Capstone September 20, 2018

## Problem

- News sources, through their word choices, are biased depending on the specific source and the specific story being covered.
- Individuals can be exposed to a less than accurate representation of a topic.

# Example



Iraq forces suspension of U.S. surveillance flights

# What is the application?

- One stop news application for users looking to catch up on recent events.
- Intended for general public, specifically people that want an impartial view of the world,
- Unbiased is a web application that will aggregate stories based on headlines.

# What can the application do?

- Aggregates news articles across many sources
- Compiles related articles into their own section/space.

# Vision

 For the general public to come away with a more accurate / impartial / nonpartisian / candid view on stories / events / the world.

# Implementation

#### Get Data

- Scrape news websites for articles
- Utilize API(s) for news sources

#### Process (and Store) Data

- Group news articles that are covering the same event
- Compare title and date to connect related articles
- Store in graph DB to store relationship between articles

#### Display Data

- Format the data and display it in a user-friendly web-app

# Technical Details P1 (Get Data)

- News aggregation APIs:
  - NewsAPI.org, Webhose.IO
  - Indexes articles from thousands of sources
  - Unified JSON return format
- Individual news API:
  - Use APIs provided by specific news websites
  - More messy



























View all (there's over 30,000 more!)

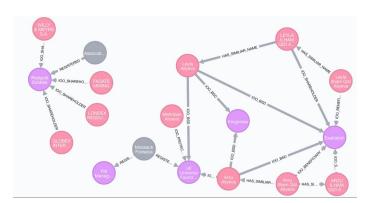
# Technical Details P2 (Process Data)

• Back-end:

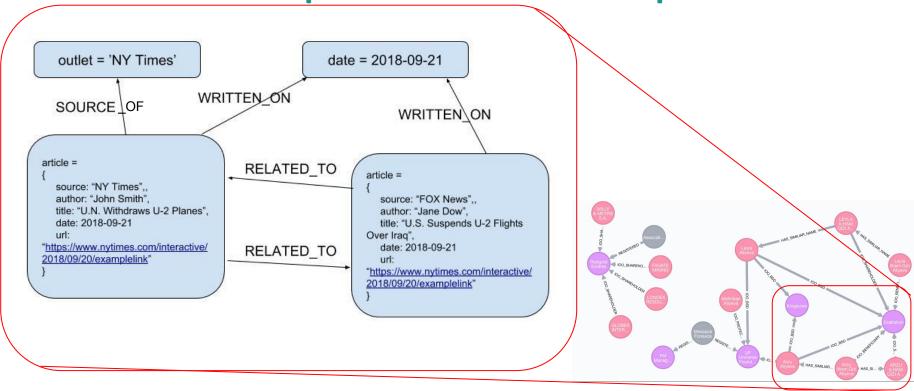


• Database:



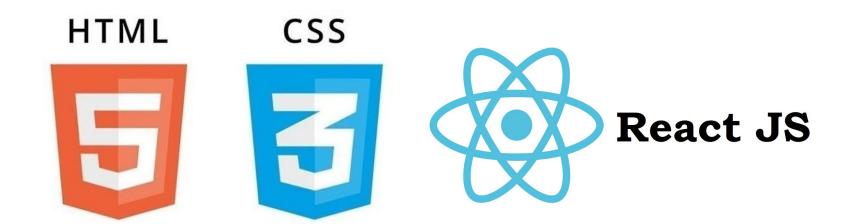


# Sample Relationship

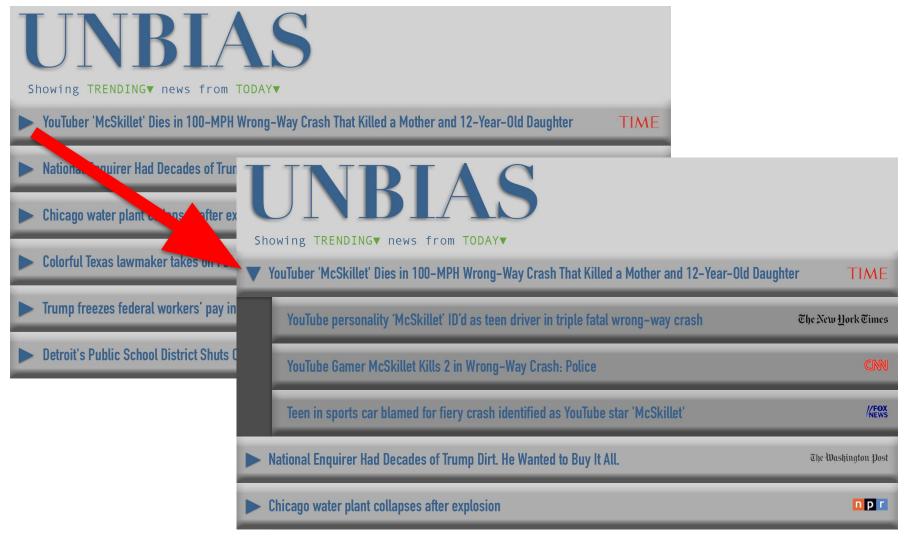


# Technical Details P3 (Display Data)

• Front-end: HTML, CSS, React.js



# **GUI** Mockup



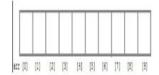
- How do we plan to use the APIs and the languages in website?
  - Use APIs to capture trending articles via JavaScript



 How can we accurately group articles into their own section/space?

#### Parser







author null

title: "Ev ngelical Leaders Are Frustrated at GOP Caution on Kavanaugh

description: "They say religious conservatives may feel little motivation to vote in the November elections unless Senate Republicans defend and confirm Judge Kavanaugh.",

url: https://www.nytimes.com/2018/09/20/us/politics/brett-kavanaughreligious-voters.html,

urlToImage: https://static01.nyt.com/images/2018/09/19/business/00scotusevangelicals-reed/merlin\_138966603\_07d91755-e0b0-4a0d-88c9-ca64e49e4052facebook\_Tumbo.jpg,

publishedAt: "2018-09-20T15:50:04Z",

content: ""The worst thing that can ever happen to any woman or man who has been a victim is to snut them down and not listen to them," said Marjorie Dannenfelser, president of the Susan B. Anthony List, a group that opposes abortion rights. "A tragic piece of this is ... [+2673 chars]"

- How to deal with articles that may fall under two groups?
  - Show them twice
  - Check if already grouped then don't group again

- How much customizability to give user?
  - Rank their top news sources and store in database
  - Rank their favorite news category

```
source: {
   id: "the-new-york-times",
   name: "The New York Times"
},
```

- How do we store the data?
  - Article database
    - Archive
  - User database
    - General info
    - Preferences

# **Project Goals**

- Basic working news aggregation platform that is user friendly
- Be able to pull from the top 5 ranking news sites
- Be able to sort all the articles from the news sites into groups with relative accuracy
- Be able to sort the articles displayed (most recent, trending, etc)

#### **Future Features**

- Allow users to be able to mark articles as favorites (?)
  - create an account, authentication, protect accounts, secure password+username, security (via database)
- Allow users to report an article as unrelated / incorrectly placed
- Archive of news articles of the same events based on what was trending for a specific date or range of dates
- Comment Section

#### Metrics

- How do we measure success?
  - General website functionality (Opening links, sorting articles, etc)
  - Basic user convenience
  - How accurately are we able to group the news articles?

#### Conclusion

- News site for users to go to that will combine all news outlets into a single source which aggregates all headlines of the same topic.
- Compare differing headlines of the same topic in order to determine the most accurate information.
- Work will be distributed equally, such that everyone will learn the workings of both front and backend.
   Initially focusing on creating a proper backend.

# Thank you.

We will now be happy to answer any questions.