

Opinion Mining & Summarization

The Team

- **Ernesto Cortes**
- **Kipp Dunn**
- **Sar Gregorczyk**
- **Alex Schmidt**

Project Info

**Multimedia, Hypertext,
and Information Access**
Instructor: Edward A. Fox
Virginia Tech,
Blacksburg VA 24061
05/01/2018

Presentation Outline

- Our Mission
 - Web-Crawler
 - Database and Web-app
 - Summarization
 - Demo
 - Lessons Learned
 - Contributions
 - References
 - Questions
-

Our Mission

- Opinion Mining Project
- Create a suite of tools:
 - Web-Crawler
 - Database
 - Summarization Toolkit
 - Web Server

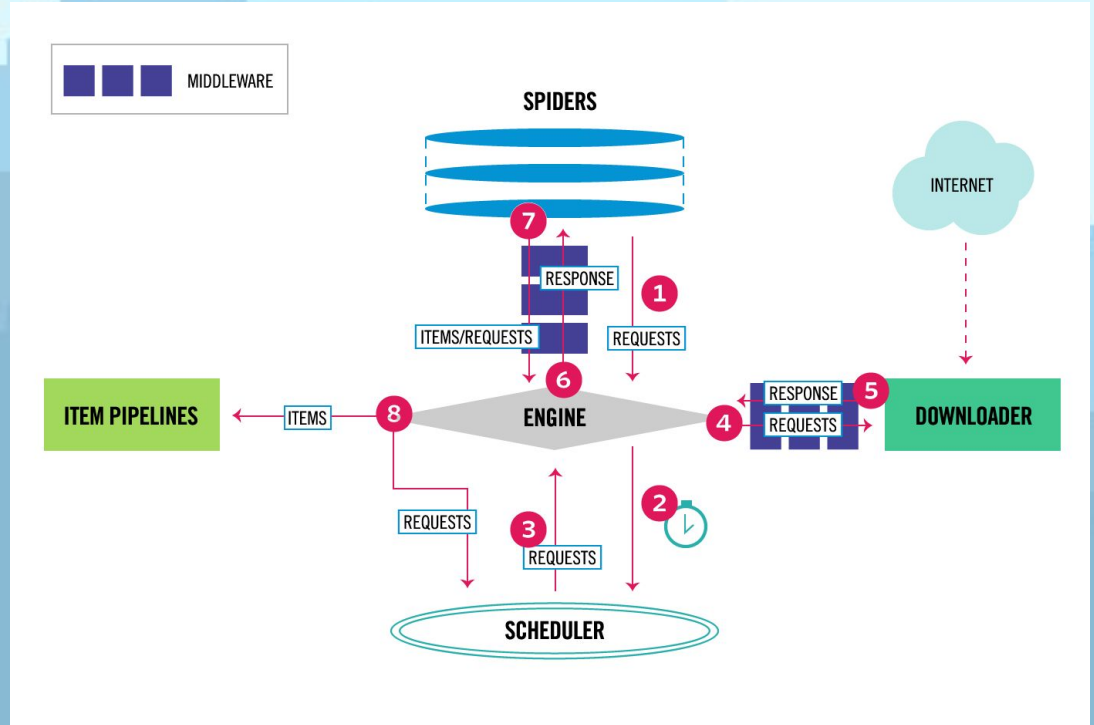
Web-Crawler (Scrapy)

Current Status

- Web Server Integration
- Documentation

Future Plans

- Additional sources



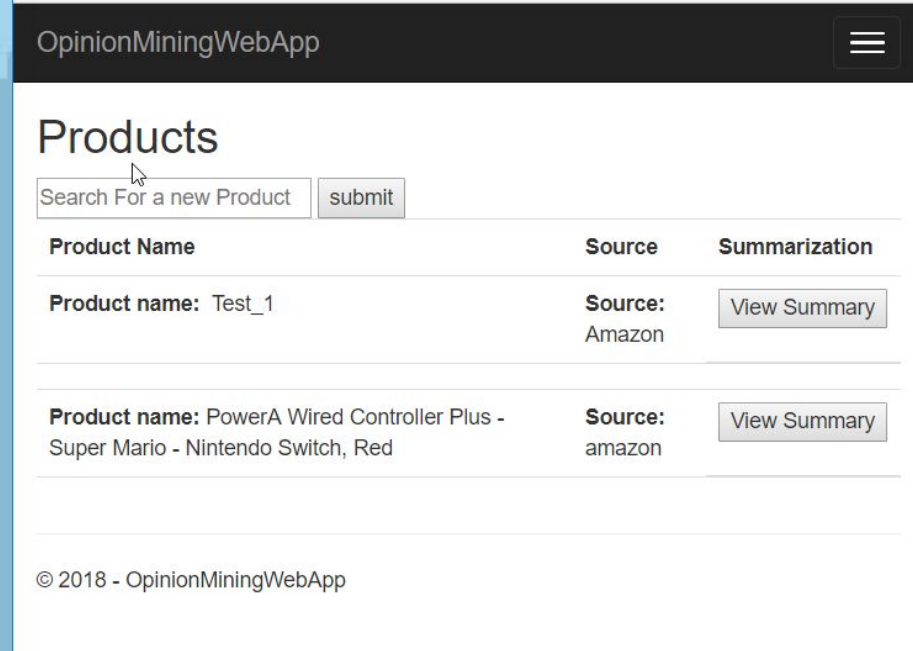
Database and Web Application

Current Status

- Integration with NLP tools
- Updated UX and UI

Future Plans

- Data Sanitization
- Crawling and NLP options
- Better UI and UX

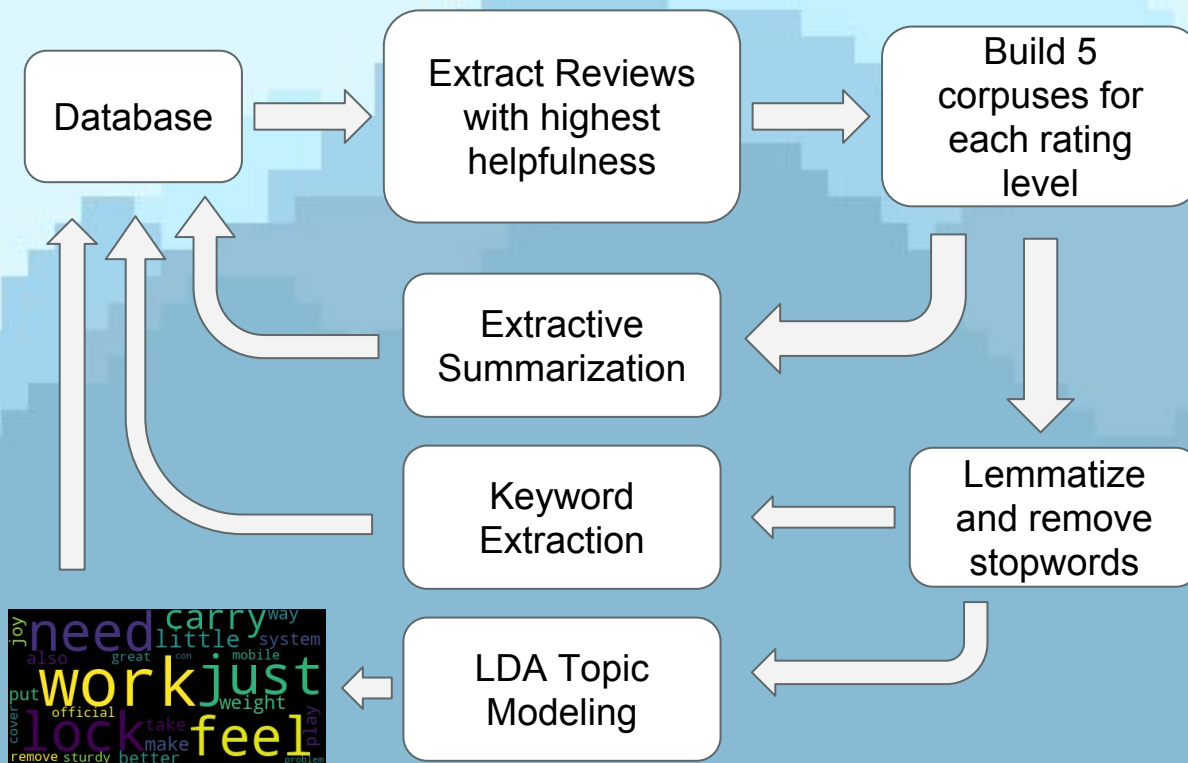


The screenshot displays the 'OpinionMiningWebApp' interface. At the top, there is a dark header with the app name and a hamburger menu icon. Below the header, the main content area is titled 'Products'. It features a search bar with the placeholder text 'Search For a new Product' and a 'submit' button. Below the search bar, there is a table with three columns: 'Product Name', 'Source', and 'Summarization'. The table contains two rows of product data, each with a 'View Summary' button.

Product Name	Source	Summarization
Product name: Test_1	Source: Amazon	View Summary
Product name: PowerA Wired Controller Plus - Super Mario - Nintendo Switch, Red	Source: amazon	View Summary

© 2018 - OpinionMiningWebApp

Summarization:



Summary Example for Dell Inspiron:

Windows 10 works beautifully on this laptop, On the flip side I think the product that I have got has some inherent issue with the in-built speakers. Especially the driver under network section with name - Intel PROSet/Wireless 3165 WiFi Driver I downloaded the above driver on a different computer and ported to this new Dell laptop via flash drive. After installing above driver, this product starts connecting to Wifi and then I felt that I can use this laptop. To correct the problem, perform the following steps (assuming your laptop will not stay connected to the internet long enough to download the updated driver):

1. However, Dells very helpful tech synced....



Final Product

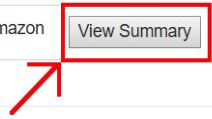
OpinionMiningWebApp Home About Contact Sources

Products

Search For a new Product

Product Name	Source	Summarization
Product name: Test_1	Source: Amazon	<input type="button" value="View Summary"/>
Product name: Dell Inspiron i7359-1145SLV 13.3 Inch 2-in-1 Touchscreen Laptop (6th Generation Intel Core i3, 4 GB RAM, 500 GB HDD)	Source: amazon	<input type="button" value="View Summary"/>

© 2018 - OpinionMiningWebApp



Product Selection Screen

Final Product

OpinionMiningWebApp Home About Contact Sources

Dell Inspiron i7359-1145SLV 13.3 Inch 2-in-1 Touchscreen Laptop (6th Generation Intel Core i3, 4 GB RAM, 500 GB HDD)

Summaries:

Rating	Review
5 / 5	<p>This will change the installed driver to the windows 10 default which fixed all my problems. I really love it I initially got an Asus transformer book flip with the 11.6 inch screen I found it both unusable in size and performance so I went to best buy and looked at all the 2 in ones and this one was the best. However, Dells very helpful tech synced our Tag Number and fixed the WiFi driver issue and has worked flawless ever since. After the experience, I would recommend the seller warn the buyer if the product has been away from dell for a period of time (however, this is why we got the configuration we wanted). The reviews for model "i7359-6790SLV" has solutions, which is the same computer but has a different drive, see http://www.amazon.com/dp/B015P3SH9W/ The Dell Inspiron 13 7000 is one of the best affordable 2-in-1s for me. The battery acted a bit odd, until it got an update from Dell and now it works flawlessly. I really like this laptop and recommend anyone who needs a good school laptop to take a look. I love the combination of premium laptop and tablet not to mention the touch and type thing with a built-in stylus. And by performance I mean gaming, You don't need to delete the thermal driver if you use the laptop for web browsing and schoolwork. Other than those issues this laptop is great. I use tablet mode and set the laptop into a tent when watching Netflix. Expect 3 hours with heavy use. This is a great deal for the price you are getting. Unlike some of the other reviewers we had 0 issues with wifi out of the box, but to be fair one of the first two windows updates it received was for the intel wifi driver. I do plan on adding more RAM as the 4GB is a little anemic, and most likely replacing the harddrive with an SSD but both of these are based on my preferences, the actual user of the laptop commented on how responsive it was, so take it as a comparison of an IT guy vs. My daughter loves this computer with touch screen. Good speed, access to Internet with ease, quality keyboard and screen. Some cons: the key board needs a cover when flipping the computer into tablet mode but not a big problem except when placing on a counter top, the camera only takes pictures in computer mode and it takes them facing the typist, it gets a little heated when sitting on my lap, sometimes the touch pad is sticky. Having just purchased this computer on 05-21-2016 on sale at a brick-n-mortar big box office store, I think the Dell update tool automatically remedies the problem of the instability with the Intel ProSet wireless adapter. If one's machine can stay connected long enough for the these updates to apply then I think one can avoid having to manually install the updated driver from the Dell support site.</p>
4 / 5	<p>Its light weight and the 2-in-1 functionality of tablet and laptop works seamlessly. Windows 10 works beautifully on this laptop, On the flip side I think the product that I have got has some inherent issue with the in-built speakers. Hope dont have to face any issue I really want to give this item 5 stars, but I think considering both Dell and Microsoft's quality control issues, 4 stars is probably a bit generous. Graphics are good, except the video driver occasionally stops functioning and resets (maybe once every few days of use, and only lasts a second or two). The touch screen works great, and the passive stylus responds pretty well for a passive stylus, with just a bit of lag. About 25-50% of the times I powered the unit on, it would hang at the Dell Logo, and if I waited long enough, it would enter pre-boot diagnostics and detect that there was no HD installed. Usually, if I pressed F8 repeatedly, it would help it along and make the machine boot into Windows, and once it did, there were no problems whatsoever and life was good. After reading A LOT of forum posts and user reviews, I can tell you that the preinstalled driver is older than dirt and needs to be updated ASAP. For a laptop that cost nearly \$700, it doesn't hold up to normal use in terms of keeping it</p>

Individual Product

Lessons Learned

- Design time is important
 - Open-source libraries are your friends
 - The client can be a great resource
-

Contributions

A decorative graphic on the left side of the slide, consisting of a series of blue rectangular blocks of varying heights and widths, arranged in a staircase pattern that ascends from the bottom left towards the top right.

- Kipp Dunn: Web Application & DB Lead
- Alex Schmidt: Summarization Tools Lead
- Ernesto Cortes: Web Crawler Lead
- Sar Gregorczyk: Documentation Lead and Team Coordination

Acknowledgements

Our client: Xuan Zhang

Currently taking the Ph.D program at the Computer Science Department of Virginia Tech. My research area is Natural Language Processing. The research projects I have been involved include:

- 1) Product defect identification based on probabilistic graphical model
- 2) Unsupervised events extraction based on topic modeling and named entity recognition
- 3) Adverse events recognition based on classification and data under-sampling



References

<https://mysql-net.github.io/MySQLConnector/tutorials/net-core-mvc/>

Gensim: <https://radimrehurek.com/gensim/>

<https://rare-technologies.com/text-summarization-with-gensim/>

Scrapy: <https://scrapy.org/>

Questions?