Automated Tool For Crisis Events Collection Building

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Instructor: Mohamed Farag
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Outline

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Client and Problem

Dr. Mohamed Farag

Research Associate of the Center of Sustainable Mobility VT, Transportation Institute

Our client needs an application that creates a collection of web pages that are related to a specified crisis event

Problem Overview

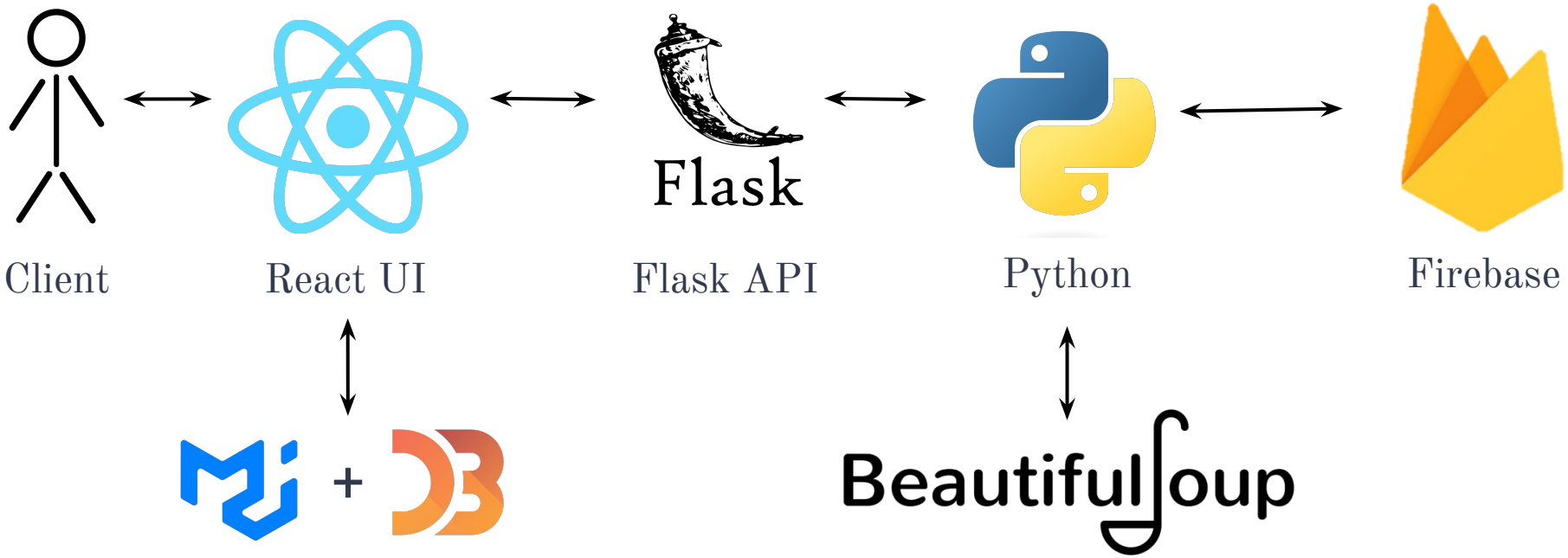
- Build a web interface for crawling web pages about a given crisis event
- User input will be in the form of a list of new line delimited URLs
- Crawler software will gather outgoing links from inputted URLs and repeat the crawling process
- Final output will be a collection of derived webpages

Deliverables

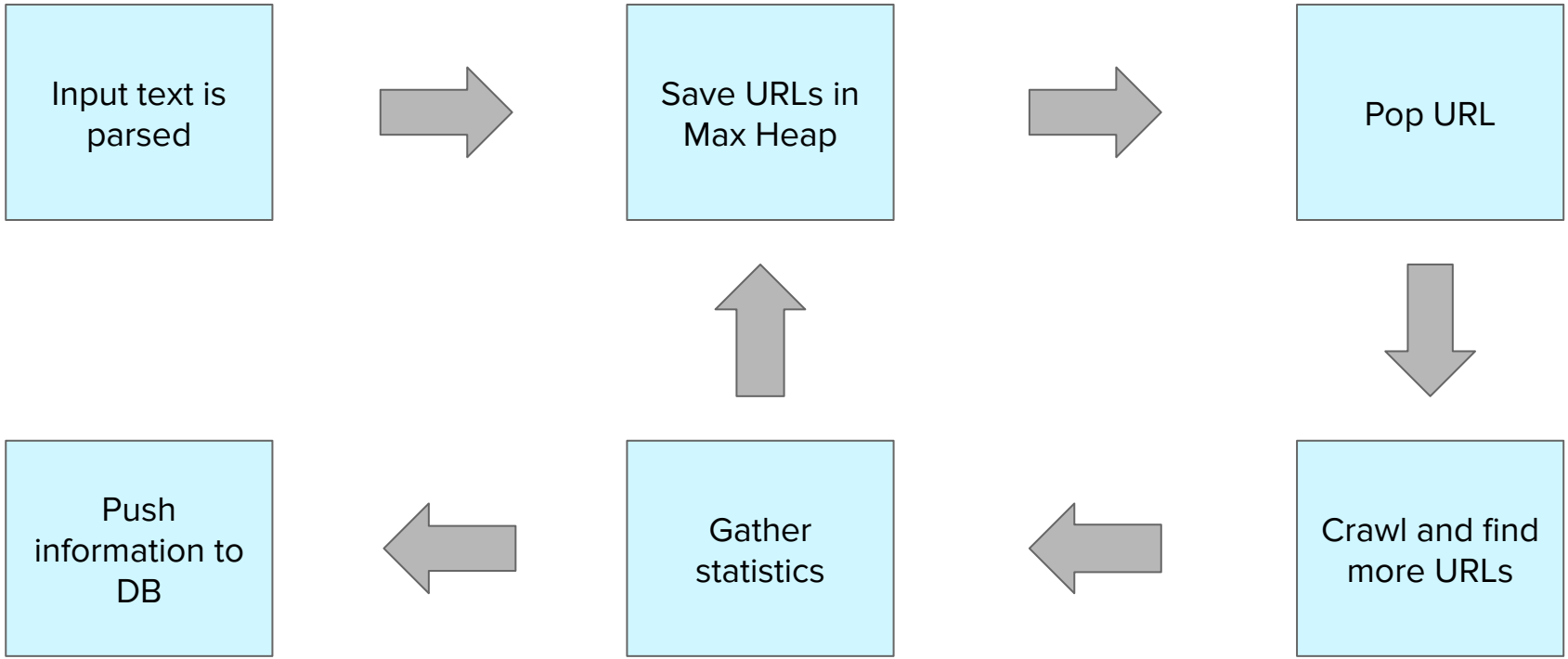
- A Web Application capable of running such crawls, accompanied by it's source code.
- User manuals of the web interface and the web crawler
- Developer manuals of the web interface and the web crawler

Features List

- User customized run
- Run crawl on input file
- Descriptive statistics of crawls
- Export pages and statistics
- Filter by specific crisis events
- User authentication



System Architecture



How the Crawler Works

DEMO

09.13

Preliminary Meetings

Meet with client to discuss relevant details and constraints with project.

09.20

Mockups

Create Figma mockups for frontend and create backend structure

10.04

Front End Prototype

Web app is set up and functional with minimal back end

10.18

Web Crawler Finalized

Implement web crawler software into prototype web application

11.10

Front End Statistics

Front end displays descriptive statistics correctly.

11.12

Final Testing / Finish Touches

Testing and bug fixing finished as well as source code and documentation

Work Completed

Future Work

- Hosting to Linux Server
- Multithreading
- More statistics
- Greater user customization

Acknowledgements

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We would like to thank our client, Dr. Farag, for meeting with us weekly to help us understand the project scope and giving us implementation advice.

References

https://firebase.google.com/docs

https://chat.openai.com/

https://flask.palletsprojects.com/en/3.0.x/