

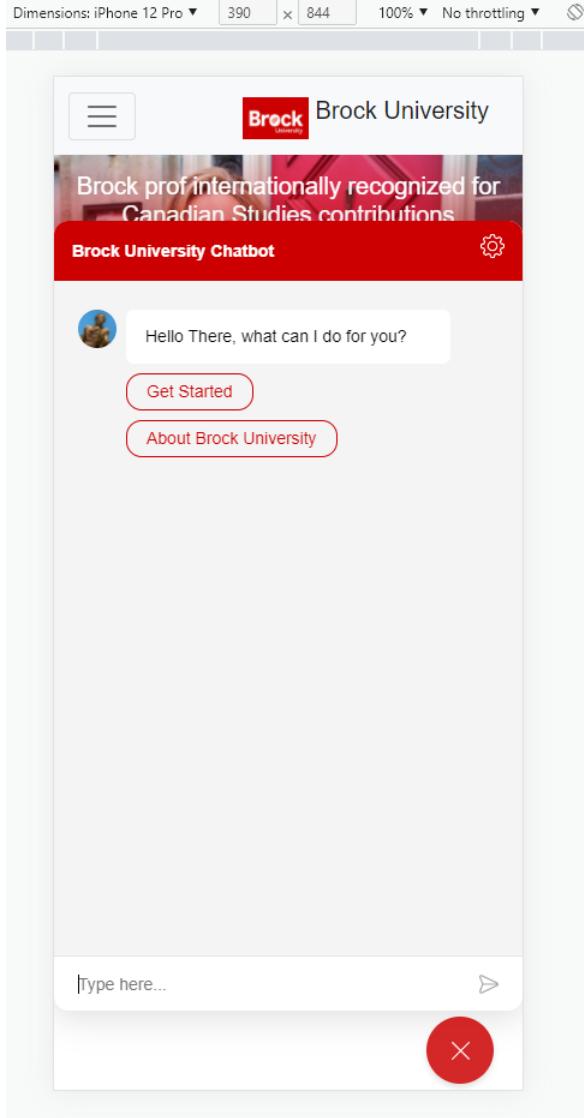
COSC4P02 Software Engineering 2
Chatbot for Canada Summer Game and Brock
University
Progress Report 2

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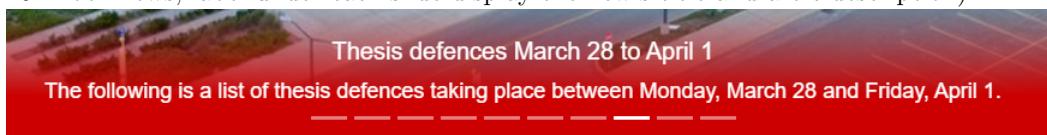
March 28, 2022

1 Sprint 3:

- Optimize the back-end's running speed, now user can get a quicker response during asking question from Chat-bot than before. (Because we add responsive design and improved NLP performance)
- User Mobile phone adaptation, that mobile user can use our bot. (iPhone 12 Pro as example)



- the background carousel size bug fixes and add label under carousel. (The carousel shows recent 10 Brock news, label under each slide display the new's title and a bit description)





- Using a map to give the parking information about the different zone of Brock

Brock University Chatbot ⚙️

About Brock University

Get Started

Welcome! Here are some questions you may ask!

Tell me about Brock

Where is Brock

What is COSC 4P01

COVID in Niagara

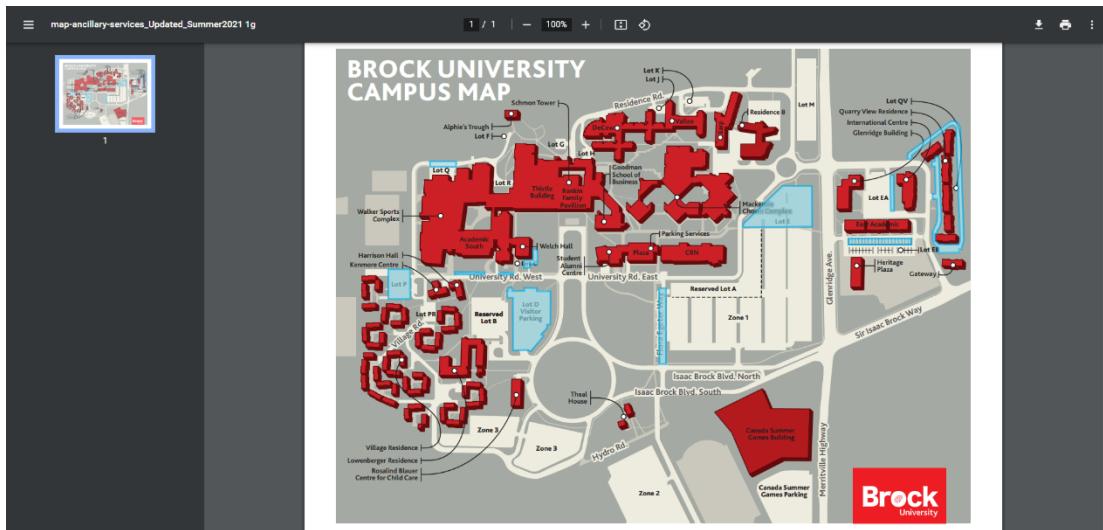
parking zone

You can find parking infomation here

Location

Type here... ▶

A screenshot of a web-based chatbot interface for Brock University. The header says "Brock University Chatbot" with a gear icon. Below it is a red button labeled "About Brock University". A large white box contains a welcome message and four red-outlined buttons: "Tell me about Brock", "Where is Brock", "What is COSC 4P01", and "COVID in Niagara". Another white box below is titled "parking zone" in bold red text. It contains a message from a profile picture of a person: "You can find parking infomation here" and a red-outlined "Location" button. At the bottom, there's a text input field with "Type here..." placeholder text and a right-pointing arrow icon.



- Given direct link to news info from Brock NEWS website

Brock University Chatbot

[COVID in Niagara](#)

[parking zone](#)

You can find parking infomation here

[Location](#)

[news](#)

Brock News is here, you can simply ask me recent activities

[Visit](#) [Exit News Search](#)

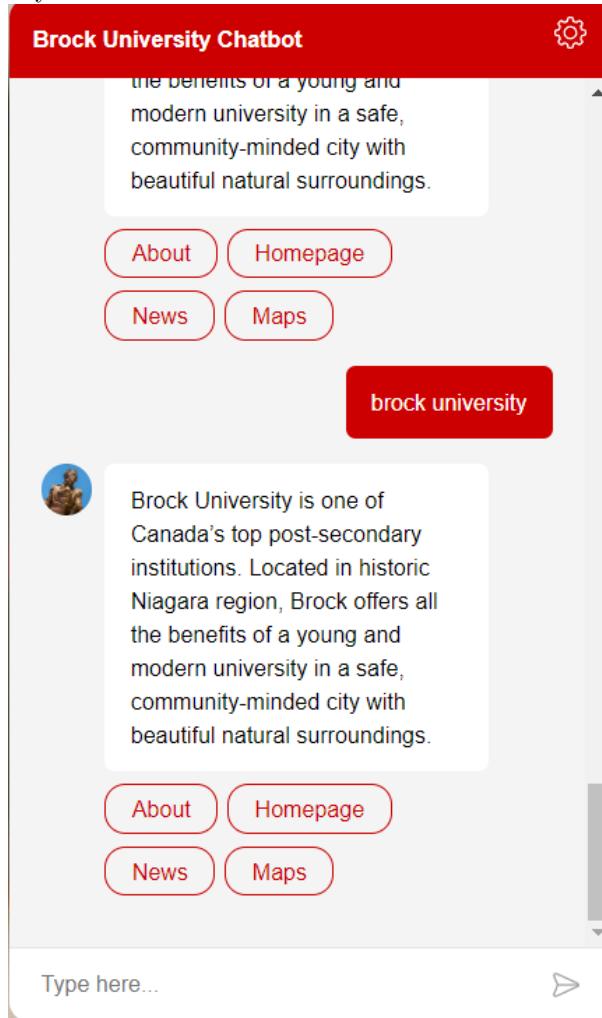
[Exit News Search](#)

News Search Exited

Type here...

- scraping the info about the instructors' name, course he teaches, which department from.
- scraping the information about Brock university. Users can get an introduction to Brock univer-

sity.



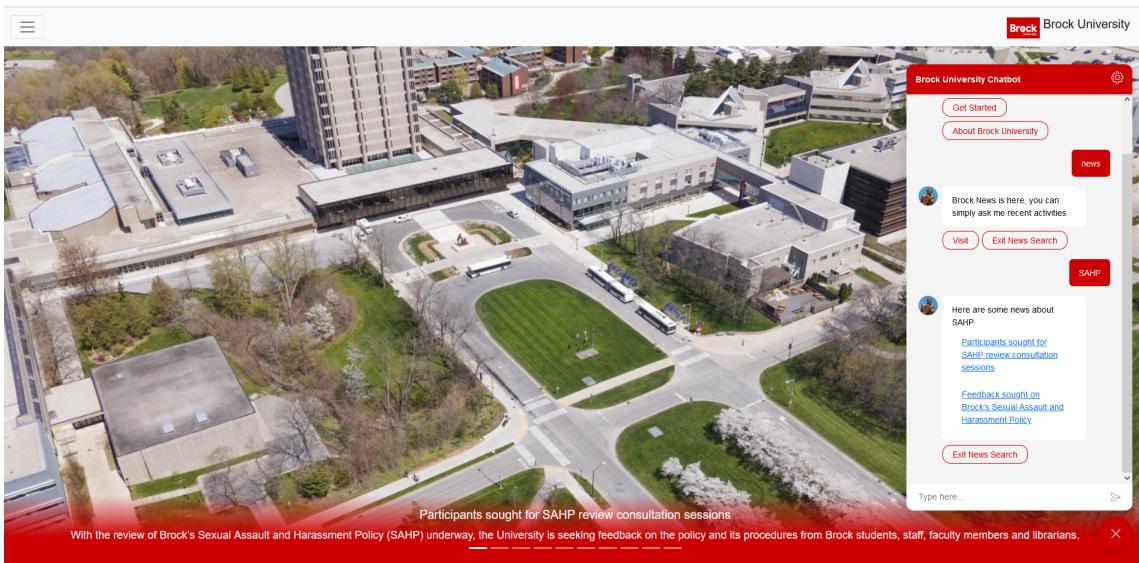
2 Sprint 4:

For the sprint 4, we still focus on scraping the data from brocku.ca and started crawl the information about the Canada game.

We scraped the Brock News and the News about the Canada Game into the json file as our database. As our front-end, we get the news as our background, so that user can easily to know more about our latest News about Brock University and Canada Game. We can see the picture below.



As we can see, there are the News picture as our background and there are the title of the News and the introduction of the News.



If the user is interested in the News, he can ask our robot with the keyword or the title of the News. For example, user can is interested in the News (please see the picture above), and he can type the keyword, "SAHP", then our robot would reply the relative news for the user, and the user can click the link and see the details.(please see the picture below).

Participants sought for SAHP review consultation sessions

FRIDAY, MARCH 25, 2022 | by The Brock News



Brock University's main campus.

Follow the author of Deny's sexual assault and harassment online (C&L) on [Facebook](#), [Twitter](#), [LinkedIn](#) and [Instagram](#).

Search The Brock News



LATEST NEWS

 Participants sought for SAHP review consultation sessions
MARCH 25, 2022

 Career fair to showcase post-secondary options for Indigenous high schoolers
MARCH 25, 2022

 How Badgers alumni laid the foundation for Brock Sports success
MARCH 25, 2022

 Brock prof internationally recognized for Canadian Studies contributions
MARCH 25, 2022

 Scholarship opportunities available through Brock's unique connection to Trinidad and Tobago
MARCH 25, 2022

 Panel to examine progressive politics, Michael Manley's legacy
MARCH 25, 2022

 Brock Media Clips for Friday, March 25
MARCH 25, 2022

 Thesis defences March 28 to April 1
MARCH 25, 2022

 Provincial and national championship matches on tap for Brock Sports
MARCH 25, 2022

 Brock celebrates employees with 25 years of service
MARCH 25, 2022

Same as Canada Game Version, we can go to the Canada Game Version and there are the News as our background. We try to keep our application is consistency.

The screenshot shows a web page for the Niagara 2022 Canada Summer Games. The main title is "Partnership Announcement" with a subtitle "Welcome to Team Ni". Below the title are logos for "TRANS CANADA TRAIL SENTIER TRANSCANADIEN" and "NIAGARA 2022". To the right, a chatbot window titled "Niagara 2022 Canada Summer Games Chatbot" is open. It has buttons for "Get Started" and "About Brock University". A message from the bot says: "Brock News is here, you can simply ask me recent activities". Buttons for "Visit" and "Exit News Search" are also present. A sidebar on the right lists news items: "Participants sought for SAHP review consultation sessions", "Feedback sought on Brock's Sexual Assault and Harassment Policy", and "Exit News Search". At the bottom, a red banner states: "Trans Canada Trail officially partners with the Niagara 2022 Canada Summer Games" and "Trans Canada Trail and 2022 Canada Games are proud to engage Canadians in a celebration of Canada, athleticism, and healthy, safe and active communities."

However, it is the same robot application but there are two different version, so the chat-bot would still keep the dialog from the last version. We will try to fix it to let the user can use the different version more clearly.

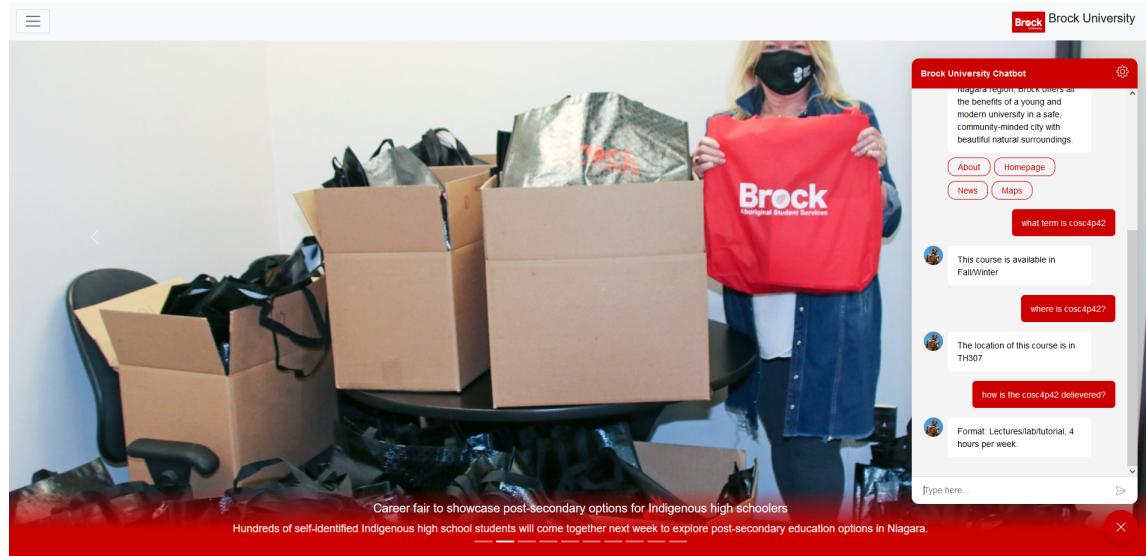
Importantly, we scraped the class information and the instructor from brocku.ca, so we can ask the any course from our chat-bot and he can tell you what is the course about and how to format.



We can see the picture above, it is not only about the computer course, it can be asked the course from any other program!



We can ask more about the course information, such as who is the instructor, where the course, how the course is delivered, what term the course is, if the course has the lab or seminar so it can help user to know the course well, also, because we are offer the course information from other program as well, user can manage their course schedule with major course and elective course easily.



In the Sprint 4, we updated the Brock parking information as well. In the past sprint, when the user ask the parking, we just show the parking information map with PDF. But now, our chat-bot can reply the user some relative information. For example, if the user is looking for zone 1, the robot would reply the closest building and the type such as if it need the parking permit or if it only for visitor and so on. Please see the picture below.



Last, we got the timetable from the Canada Game about the sport, where is the game and when is the game. However, we still got the data but not connect with our chat-bot yet. It can be moved to next sprint to connect with it. There is a part of timetable for Canada Game.

1	week1		
2	event	location	date
3	Opening Ceremony / Cérémonie d'ouverture	Meridian Centre (St. Catharines)	2022.08.07-2022.08.13
4	Baseball - Male / Homme	Welland Baseball Stadium (Welland) / Oakes Park (Niagara Falls)	2022.08.07-2022.08.13
5	Basketball	Meridian Centre (St. Catharines) / Niagara College (Welland)	2022.08.07-2022.08.13
6	Beach Volleyball / Volley-ball de plage	Canada Games Park - Parc des Jeux du Canada (Thorold)	2022.08.07-2022.08.12
7	Box Lacrosse - Female / Crosse en enclos - Femme	Canada Games Park - Parc des Jeux du Canada (Thorold)	2022.08.07-2022.08.12
8	Cycling - Mountain Bike / Vélo de montagne	Twelve Mile Creek (St. Catharines)	2022.08.07-2022.08.09
9	Rugby Sevens - Female / Rugby à sept - Femme	Brock University - Alumni Field (St. Catharines)	2022.08.07-2022.08.12
10	Soccer - Male / Homme	Youngs Sportsplex (Welland)	2022.08.07-2022.08.12
11	Softball - Female / Femme	Southward Community Park (Grimsby)	2022.08.07-2022.08.11
12	Swimming / Natation - Para swimming / Paranatation - Special Olympics / Olympiques spéciaux	Brock University - Eleanor Misener Aquatics Centre (St. Catharines)	2022.08.07-2022.08.11
13	Swimming - Open Water / Natation en eau libre	Welland International Flatwater Centre (Welland)	2022.08.12
14	Tennis	Niagara-on-the-Lake Tennis Club (Niagara-on-the-Lake) / Welland Tennis Club (Welland)	2022.08.07-2022.08.13
15	Triathlon	Welland International Flatwater Centre (Welland)	2022.08.07-2022.08.12
16	Wrestling / Lutte	Canada Games Park - Parc des Jeux du Canada (Thorold)	2022.08.07-2022.08.11

3 Challenge

There are some challenge for us during the Sprint 4. Because the data structure from Canada Games is different from Brock's, we need to learn the different way to scraped the data from Canada Game website. Also, there are about 60,000 athletes from the Canada game, so we still need to more time to handle our data. Fortunately, we already found the way to scrape the data from Canada game, and we can see the picture below. we already scraped some athletes' name, career and their major sport, so we think we need to scraped more information about it and we can deal with this challenge.

MARJORIE, A CHIN, Athlete, Athletics
 TIMOTEY, A. LACHANCE, Athlete, Basketball
 PETER, AAEN, Athlete, Soccer
 STEVEN, AAEN, Athlete, Rugby
 SARAH, AAGNEW, Athlete, Swimming
 LOGAN, BALDERS, Athlete, Wheelchair Basketball
 JOAN, AALUND, Athlete, Field Hockey
 JEFF, AARTS, Athlete, Athletics
 ANDREEA, ABABEI, Athlete, Tennis
 EMMA, ABAD, Athlete, Gymnastics
 ELIZABETH, ABANDA, Athlete, Tennis
 JULIO, ABATE, Athlete, Diving
 CELINA, ABBA, Athlete, Volleyball
 HAFSA, ABBASI, Athlete, Table Tennis
 JAY, ABBASS, Athlete, Tennis
 KAITLYN JANELLE, ABBASS, Athlete, Hockey
 MARY, ABBASS, Manager, Fencing
 JUDITH, ABEY, Athlete, Volleyball
 BOB, ABBOT, Coach, Manager, Softball
 ADAM, ABBOTT, Athlete, Alpine skiing
 ADRIAN, ABBOTT, Athlete, Volleyball
 ALEX, ABBOTT, Athlete, Baseball
 ANNE MARIE, ABBOTT, Athlete, Volleyball
 BILL, ABBOTT, Coach, Softball
 CALLI-ANNE ROSE, ABBOTT, Athlete, Athletics
 CATHERINE, ABBOTT, Athlete, Volleyball
 CHRIS JEREMY, ABBOTT, Athlete, Canoe Kayak
 CHRISTOPHER, ABBOTT, Athlete, Canoe Kayak
 CLAIRE, ABBOTT, Coach, Manager, Athlete, Table Tennis, Basketball
 CLINT, ABBOTT, Athlete, Swimming
 COLIN, ABBOTT, Athlete, Softball
 COLIN, ABBOTT, Athlete, Cross Country Skiing
 DENIS, ABBOTT, Athlete, Soccer
 GLENN LEE, ABBOTT, Athlete, Wrestling
 IAN, ABBOTT, Athlete, Badminton
 JIM, ABBOTT, Athlete, Baseball
 JONATHAN, ABBOTT, Athlete, Canoe Kayak
 JOSIE, ABBOTT, Athlete, Volleyball
 KATHRYN, ABBOTT, Athlete, Field Hockey
 KATIE, ABBOTT, Athlete, Sailing
 KEARLEY, ABBOTT, Athlete, Volleyball
 MARK, ABBOTT, Athlete, Basketball
 MATTHEW JAMES, ABBOTT, Athlete, Canoe Kayak
 MICHAEL, ABBOTT, Athlete, Soccer
 MJ, ABBOTT, Manager, Canoe Kayak
 PHIL, ABBOTT, Coach, Athlete, Cycling
 RAE, ABBOTT, Athlete, Swimming
 THOMAS, ABBOTT, Athlete, Weightlifting
 TOM, ABBOTT, Coach, Weightlifting
 WILLIAM, ABBOTT, Manager, Sailing
 MARNI, ABBOTT-PETER, Coach, Wheelchair Basketball
 JADE, ABOUD, Athlete, Ringette

4 Next Sprint features:

We planned to add Brock news message bubble and unit testing function. And finishing scrap all relative information from Canada games. So that user can simply ask chat-bot about Canada games relevant information, such as athletes detail information and team information, match date, etc. For UI design, we planned to establish a colorblind button which can changing the theme color that is friendly for the people who has colorblind issue. For back-end, we will design a automate testing tool for chat-bot system. So that it can help the development team to easier discover some issues might appear.

5 The issues that we encountered:

We already solved:

- How to scraping the Brock News and using it on our carousel without mistake.
- How to return the accurate and relevant Brock News when user searching some particular keyword.

We encounter now:

- How to precisely and rapidly scrap all the information of Canada games.

6 contributions and achievements:

Name	Role	Contribution
Dazhi Gao dg15rv@brocku.ca	Team Leader Report Representation Github Timetable Arrangement	<ul style="list-style-type: none"> • Responsible for progress reports that clearly and unmissly display that what our team did in each sprint • Represent the presentations of our application to product owner (TA) • Control application progress and direction, strictly follow scrum method • Uploading report file into Github • Creating and coordinating timetable, weekly meeting and sprint reviews • Testing application functions and proposing issues and improvements • Creating and maintenance Scrum board • Assign tasks to different subteams and regulatory each sprint process
Tianyu Zhou tz17va@brocku.ca	Scrum Master Lead Developer Backend Frontend Crawler DataAnalysis Github	<p>Backend:</p> <ul style="list-style-type: none"> - NLP Implement - Switch to Modular Design Pattern - Load Crawler data into NLP <ul style="list-style-type: none"> - Parking - Courses - Navigation - etc. - Add database support - Add NLTK for news search - Question Auto Testing - Organize and create training data - Fuzzy Search - Add ESLint to ensure code quality - Publish to NPM for easy deploy - Covid Information API - Provide Api to frontend <ul style="list-style-type: none"> - Brock News - Chatlog Download - WebSocket for chatting <p>Crawler:</p> <ul style="list-style-type: none"> - Course timetable & description & location etc. - A mini program that convert xlsx to json format - Niagara Region Covid Status and dashboard <p>Frontend:</p> <ul style="list-style-type: none"> - Design the general chatbot template for teammates to use - Add WebSocket for connecting to backend - Add Chat Log Download - Help Button - Document for users and developers <p>Github:</p> <ul style="list-style-type: none"> - Uploading and organizing code and docs - Testing uploaded source code to ensure usability <p>Team:</p> <ul style="list-style-type: none"> - Assign works to team members <p>Server:</p> <ul style="list-style-type: none"> - Setting up environment for backend hosting <p>More contributions can be found here: https://github.com/COSC-4P02/COSC4P02Project/commits?author=KrunkZhou</p>

Icarus Zhu pz15gx@brocku.ca	Frontend Programmer, DataAnalysis	worked on the front-end. Designed and created the Vue application. Implement the back-end and front-end segment data and document interface specification. Implementation of the navigation and the background. The search function of chatbot is implemented. The carousel of Brock News and Canada games are implemented. The Switch of Chatbot Brock and Canada games versions. Optimize the details of mobile phone users. Testing and maintenance of the applications. Implement the data type and format of the chatbots.
Zijian Feng zf16eq@brocku.ca	Frontend programmer UI	-Assisted in designing and creating the Vue application. -Navigation bar push-button design with bootstrap -font adjustment -Chatbot UI and color design -Chatbot layout design -Chatbot dialog box theme and font design -Testing of mobile apps -Chatbot interaction and card design include url links, pictures, maps -the switch of the font size of the application -
Junhui Chen jc19si@brocku.ca	Report, Representation, Crawler, DataAnalysis	-crawler the canada game athlete data -crawler the final exam data -crawler the course description data -testing the app -testing the chatbot function -contribute the report -analyze the data to use -conduct the scrum board
Wenjie Li wl14ht@brocku.ca	Report, Representation, Github, Timetable, Crawler, DataAnalysis	- Posting the Document on Github. - Maintain the Scrum board - Testing the App - Scraping the data about Brock Parking, News, course and some info about the Canada game (continue) - Represent the presentation about the crawler part - Understand different subteam work - Responsible for the report
Jiayang Lai jl17za@brocku.ca	Backend	- Collecting information corresponding to chatbot, including COVID-19 information of Brock University and surrounding areas. - Help designing and gathering data about niagara region COVID-19 crawling service and APIs. - Assisting team on testing and usage of web platform of the chatbot. - Maintaining communication with scrum master to advise the newest change to other members of the group during scrum review meetings. - Generating user stories and providing development suggestions on vivify scrum board. - Conducting various test to check the usability of the app on different platforms, including but not limited to - Mobile Platform(iOS, Android, Windows Mobile). - Desktop Platform(Windows(x86), macOS(x86), Linux(Ubuntu, centOS))

Siyuan Zhao bz17gr@brocku.ca	Report, Representation	<ul style="list-style-type: none"> - Create user stories and provide/discuss development suggestions - Revise and correct errors in user stories - Search & collect information for chatbot - Testing website functionality to ensure it is working correctly - Testing app compatibility and suggest modifications - Write report based on previous sprint on scrum board - Provide ideas on each daily sprint about what coming next
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