

COSC4P02 Software Engineering 2
Chatbot for Canada Summer Game and Brock University
Progress Report 1

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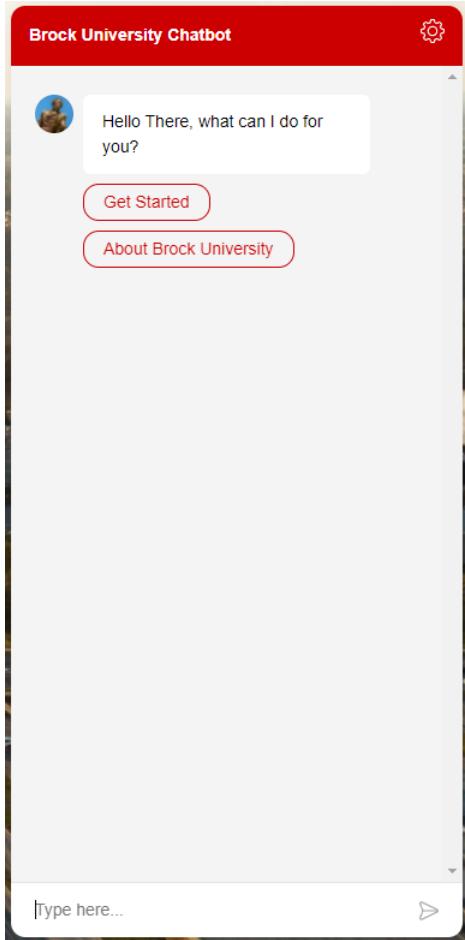
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February 28, 2022

1 Sprint 1:

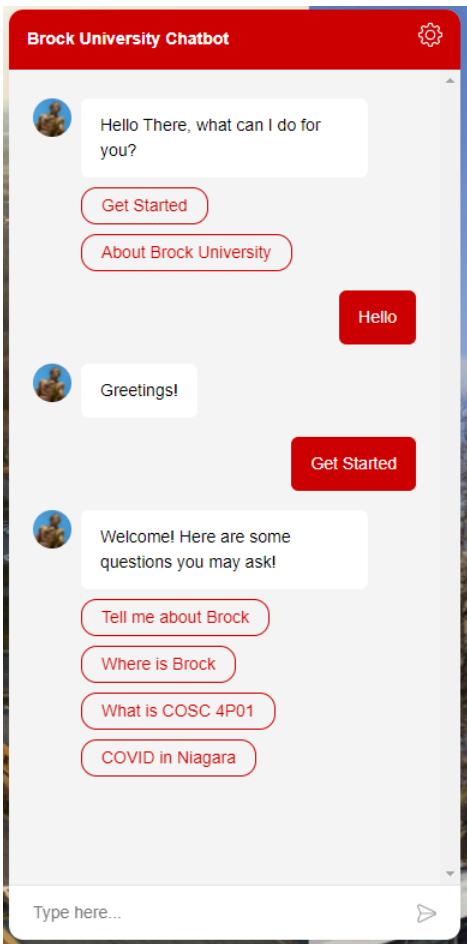
- A well-defined and easy understanding chat-bot user interface



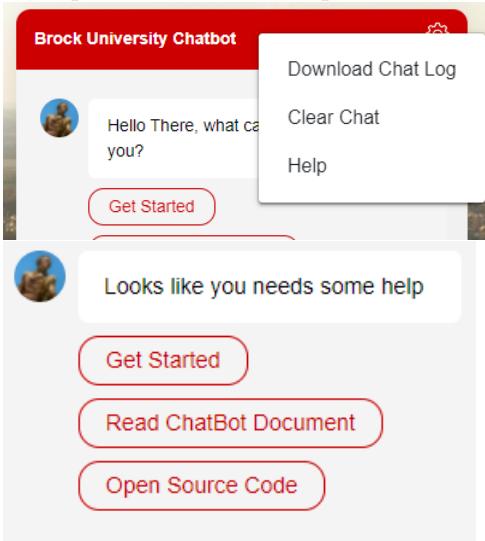
- The entire approximately user interface of our application



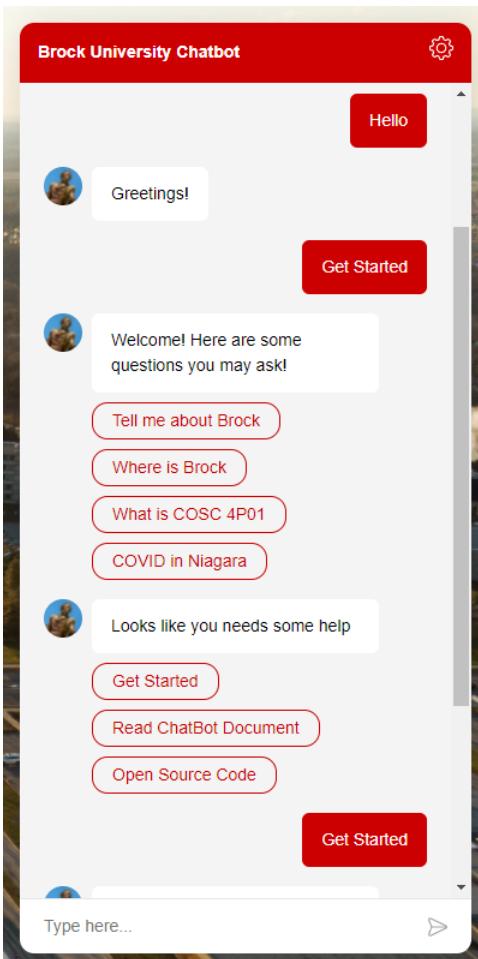
- Chat-bot can ask and answer proper question



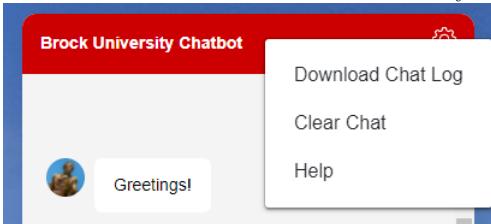
- A Help button that can help user to understand how to use the chat-bot

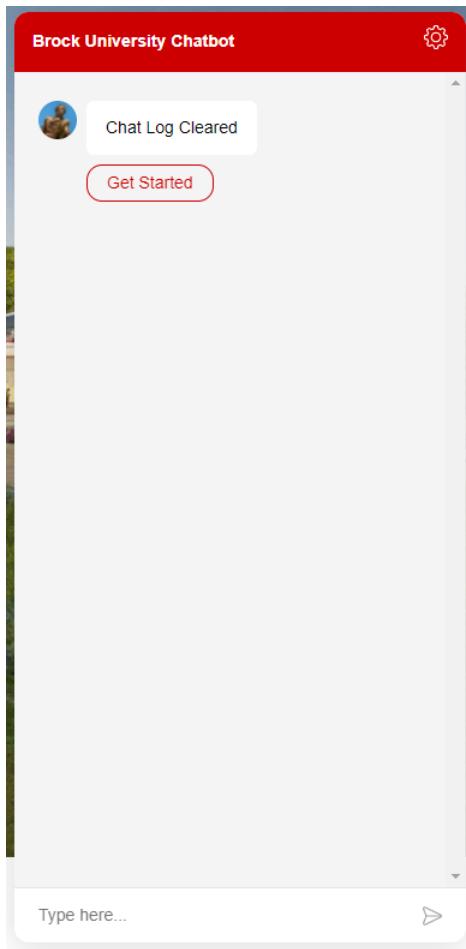


- A scroll-er that can scroll message up and down

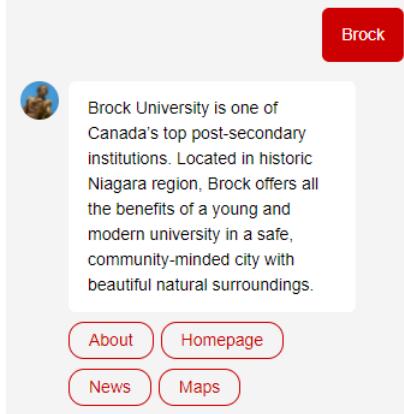


- A clear button that can clear all history messages which represent in chat-bot message box

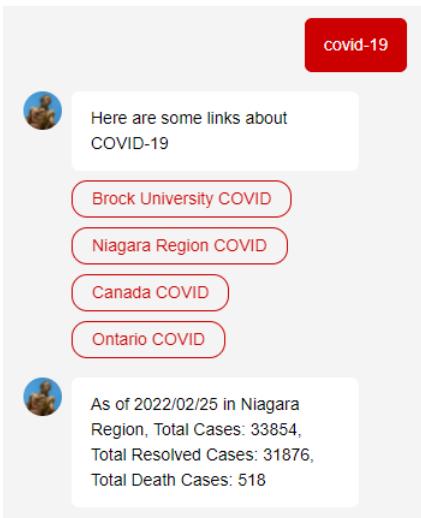




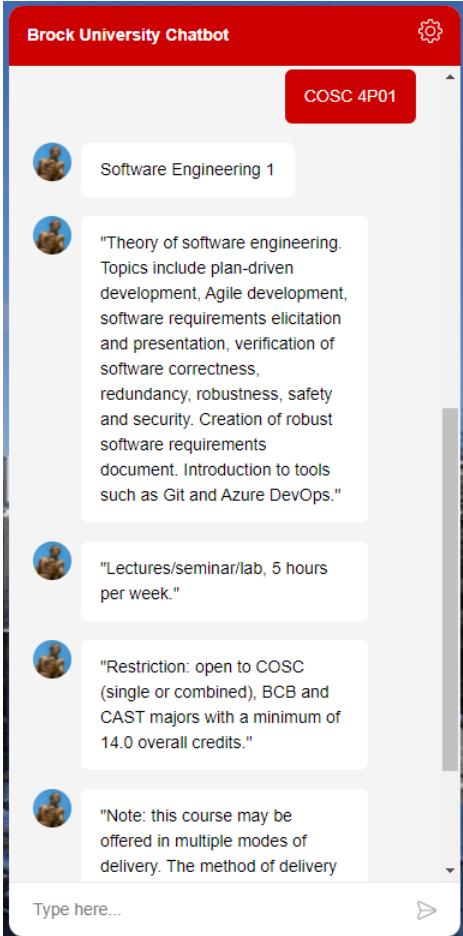
- Keyword search, when user typing stuff as keyword version. Chat-bot can understand and given proper answer.



- Covid-19 information is contained in application, the data is up-to-date.



- Course recognition, user can ask about any course in chat-bot, then chat-bot will give all relevant information about the course.



- Chat-bot can be running from different browser, such as Firefox, Opera, Chrome and Safari.
- A switch version button between Brock version chat-bot and Canada summer game version

Brock Bot X

Official Web

Switch Bot ▾

| |
|--------------------------|
| Brock university |
| Niagara 2020 Summer Game |
| Something else here |

Font size ▾

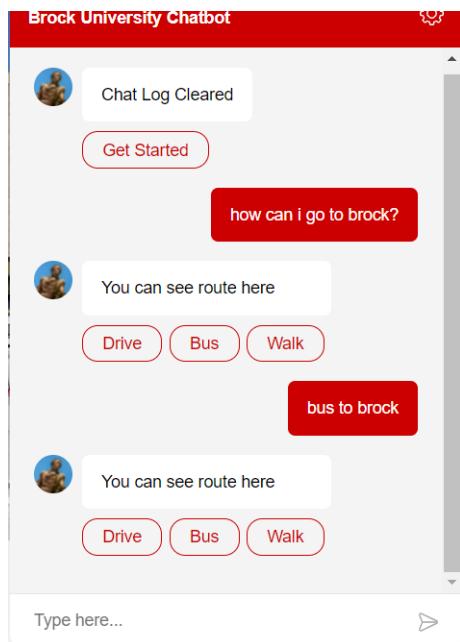
2 Sprint 2:

After the development of sprint2, we can use our chat-bot to search the route about how to go to Brock or Canada games by bus, drive and walk. Also, our Back-end change to Modular Design Pattern, so that users can have a more simple and clear interface, it would be easier to use. We also created some basic questions and some training data, so that we can ask the chat-bot some questions and the chat-bot can answer with our training data. Our training data includes some basic Brock university information, some Canada games information, our program and course, about the Covid-19 period policy and transit information. Most of the answers are from the answer list for some basic question, however, we would use Crawler to scrape the information instead of those training data in our next few sprints, so that we can have a good database more easily and correctly. In order to take care of the old or someone who has special needs, we set the different sizes of text, so that people can have

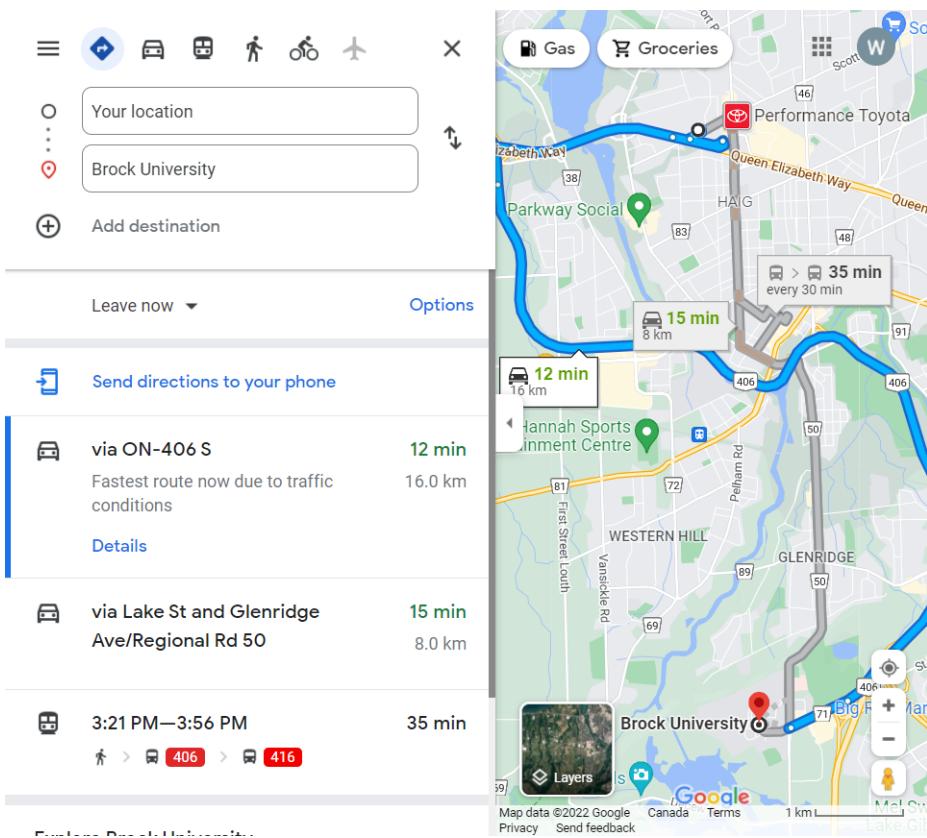
a bigger size to view. In the Sprint 2, we started to develop Natural Language Processing, so that the chat-bot can reply to the question much nicely and friendly, and also it can give them the answer much correctly. In order to have an intelligent chat-bot, we use the fuzzy search to help the wrong typing words which the user entered. It means the chat-bot can identify the misspelling or some tiny errors of words.

In sprint two, we are trying to set a period of time that all the work is done. mostly, we totally understand how long our goal and mission of the timing box is going to be. because we need to know what is sprint 3 and sprint 4, we have to have the proposal. the sprint 2 planning is going to kick off the sprint by setting the agenda and our crawler group focus. we know that we are the first crawler to the basic date. we used biochemistry as the first data we have to crawl. We use some package to crawl our data. As my experimental subjects. I used several keywords which is inside the web page as the data crawler target. The next step which is we use the COSC major as our second experimental subjects. We got some document. We successfully crawl the COSC the course number, course title and the course of description. In addition, we are trying to crawl the bus data from the bus API. Although it is the basic apiece still can some useful information on the API.

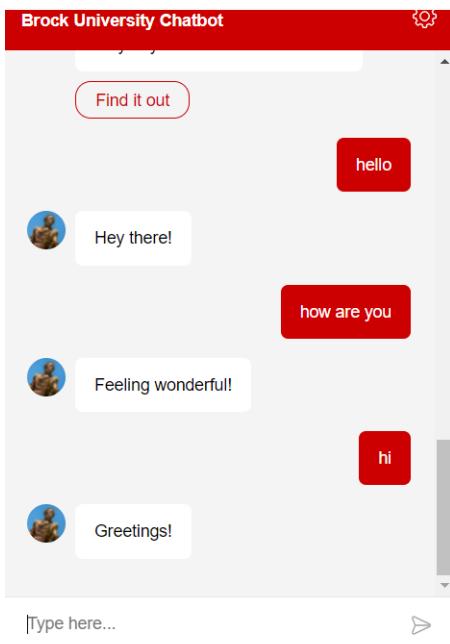
3 Application overview:



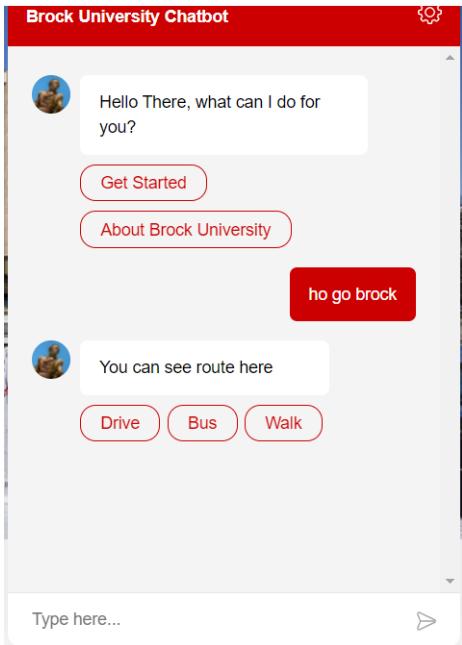
We can see in the picture. When we ask the route to the Brock, chatbot can understand it in different way to ask and give out the same answer. Also, you can choice different way to Brock, such as driving car, taking bus or walking.



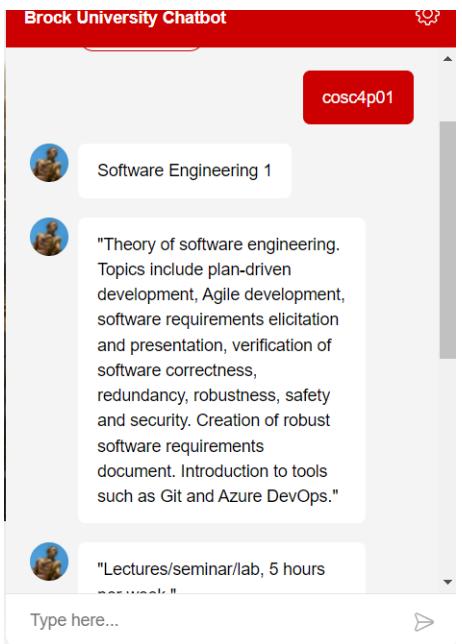
When you select one of the selection, it would jump into a google map and show your different way to Brock university depending on your location.



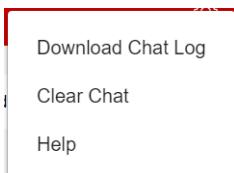
Our goal is developing a cool and friendly robot to help our user, so that they can feel talking with real person. When you say hi to our robot, our robot is willing to greeting with you in different way!



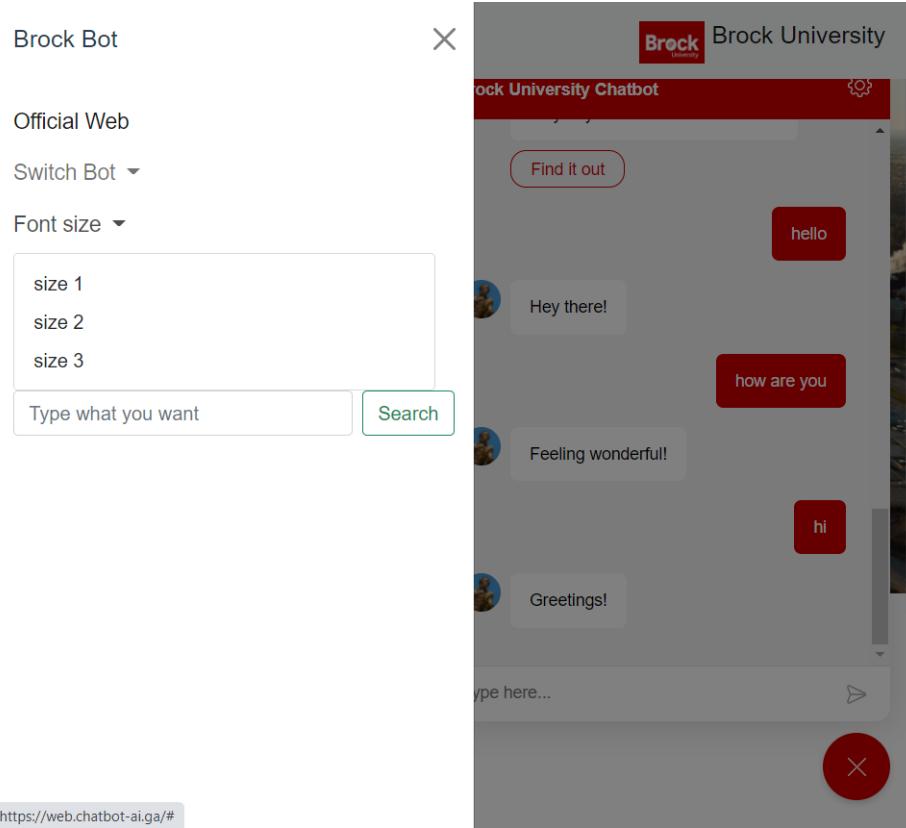
You don't need to worry about any misspelling because our robot can identify the wrong word and try to guess what you want to say. Look at the picture. He still understand you want to ask the route to Brock even you say “ ‘ho’ go brock”.



Here is one of function for our robot. You can ask any detail about the Brock including the courses, programs, News and so on. However, we just finished the training data to reply some of questions, we will focus on crawl the data from Brock University Website, so that it can much more intelligent to reply the related question about the Brock.



Here is a Clear button and Download char log button. If you don't scroll all the window all the time and already finished the last conversation, you can clear the chat and keep asking question with chatbot. Also, you can download the chat log. Keeping the record so that you can read that on your local computer.



On the left side, it has a navigation bar. You can choose the font size you like. That is help people who are not good sight seeing.



When you go to our web page, it will notice that you are in 4G network (wifi), or you are in mobile network(2G or 3G).

Brock Bot

Official Web

Switch Bot ▾

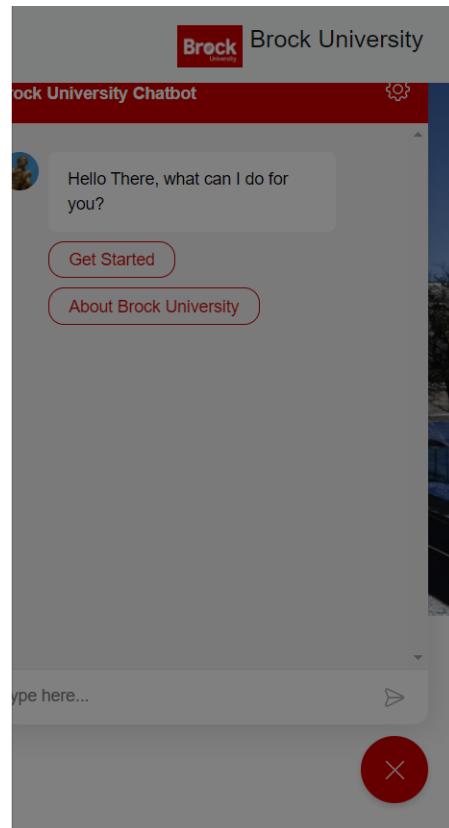
Brock university

Niagara 2020 Summer Game

Something else here

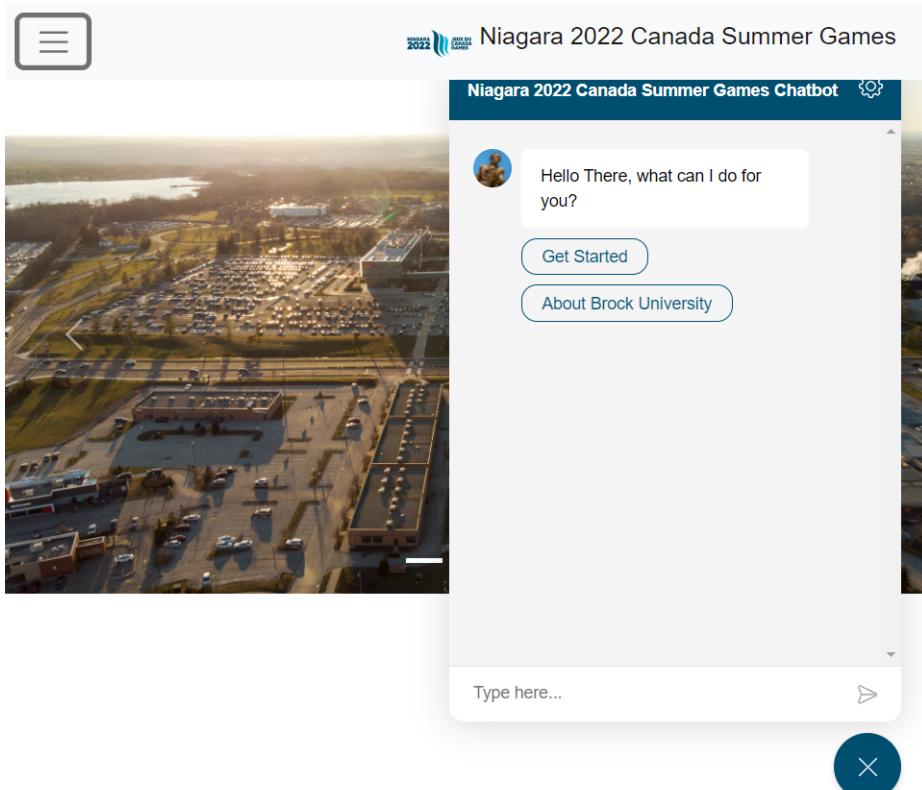
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Search



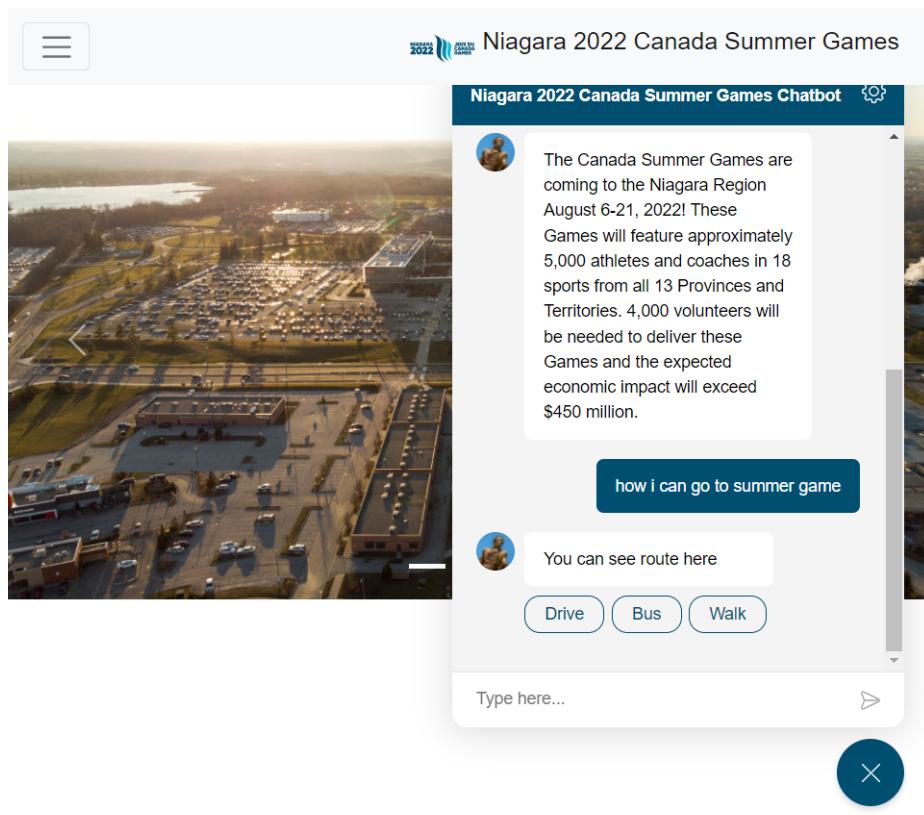
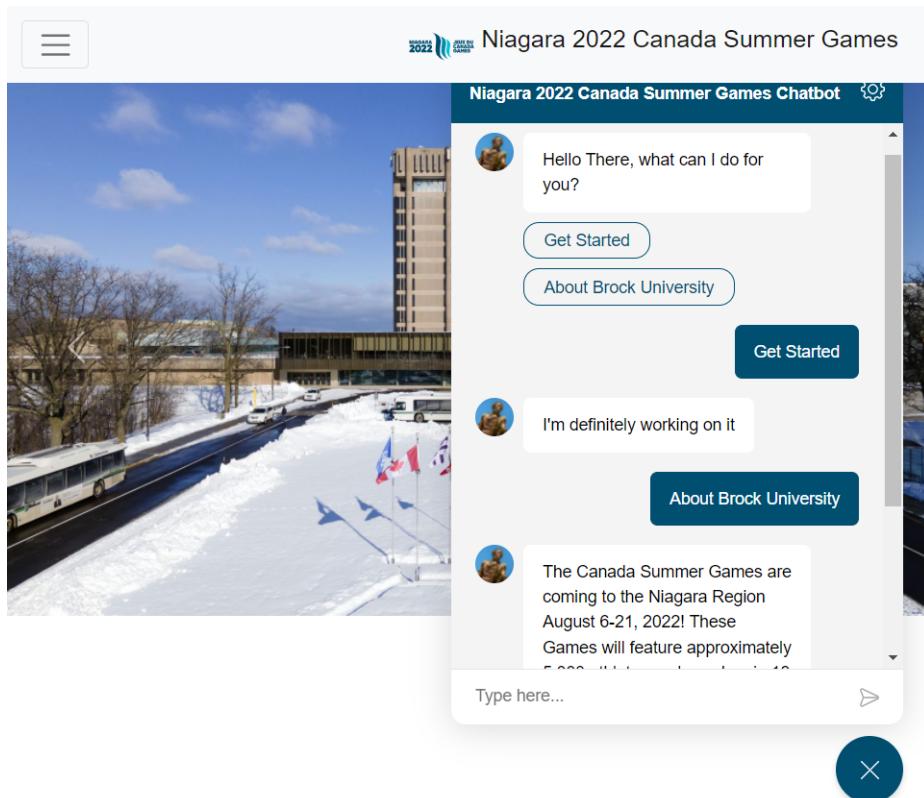
<https://web.chatbot-ai.ga/#>

Also, we have another version: Summer games. However, it just a basic model so far. In the coming sprint, we will focus on scraping the data for brock, then we will focus on the summer games as well.



We can still find the error in the summer games version, it still shows you "About Brock University".

As a basic Version, we are debugging and try to modify the better version, that is what we are working on it.



Similarly, when you ask how to go Summer games, our chatbot would help you in 3 different way. That is pretty much for Sprint2.

4 Next Sprint features:

We are planning to implement some features in next sprint, it will contain scraping the news information from Brock NEWS website. Scraping the information about Brock university, user can get an introduction for Brock university. Scraping the parking information about the different zone. Scraping the course schedule about how often the course in a week, how for the course, where is the classroom, online or in-person. Based on the time, to arrange the register the course so that it wont have conflict. Those features is mostly concentrate on Brock's information, so that no matter the user is student or visitor can gain more information from our application.

5 The issues that we encountered:

We already solved:

- How to get precise information from specify website.
- How to design a user-friendly interface.
- Where to storage the data that we scraped.
- How to determine the user tiny typing mistake and given right information.

We encounter now:

- How to scrape the final exam timetable.
- How to improve the user experience from the outlook and chat-bot.

6 contributions and achievements:

6.1 Front-End:

- Creating the chat-box with robot and user
- A Navigation bar for two different version(brock, Niagara game)
- Clean chatlog button, help button, and icon.

Icarus Zhu & Zijian Feng & Tianyu Zhou

6.2 Back-End:

- Natural Language Processing (continued)
- Training data (continued)
- Google MAP api connected

Tianyu Zhou & Jiayang Lai & Icarus Zhu & Dazhi Gao

6.3 Crawler

- Scraping the data of Program (COSC, Economy, biochemistry and so on, continued)
- Scraping the bus api
- Creating the CSV form to be stored in database

Junhui Chen & Wenjie Li & Tianyu Zhou

6.4 Report & Presentation:

- Proposal (arrange the meeting time, arrange the tasks of development)
- Assign the tasks to different teams
- Test the version and give feedback to different teams
- Search the related resource
- Understand the process of development from different team
- Process report

Junhui Chen & Wenjie Li & Siyuan Zhao & Dazhi Gao