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

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1 Introduction

Brock university is one of the famous universities in Niagara region, there are a lot of students experiencing their education in this university. Also, the number of new students increases every year, it is necessary to provide high quality system for student to experience it. However, it is a challenge for students to communicate with student consultant or department Co-ordinator or get any information bout Brock university because of the COVID-19 pandemic.

Niagara 2022 Canada Summer Game is a largest multi-sport event in Canada, more and more tourists are interested in this amazing sport completion.

For our team, we aims to develop a chatbot system with two versions which can help student to get any general information from brock university and provide the detail about Niagara 2022 Canada Summer Game for those people who are interested in.

2 Objectives

2.1 Goal

Building a convenient and easy-use Chat-Bot browser-based chatbot engine. It allows every user to obtain the true and accurate information that they would like to know, either in Brock University or Canada Games. The information that will be output will be based on the user's current version of Chat-Bot. Also the application can reduce the cost of hiring the representative for consultation, it works through many platforms such as mobile phones, laptops, tablets and desktop computers.

2.2 Importance

It is important because every student or visitor of Brock University has many questions about course arrangement or professor information and so on. The Chat-bot Brock University version can help users to obtain the information that they would like to know rapidly. And also, the Chat-bot Canada Games version can help customers and visitors to gain what they wanted to know in a quick and convenient enviorment. Since there are tourists from different places in order to join the Canada Games, there

will be lots of questions from them. Wanna reach a real representative is kind of time-consuming. Therefore the Chat-Bot can help them to obtain what they would like to know immediately.

2.3 Overall description

For students from and who are interested in Brock university, they are able to access basic information about the course. It includes the course description and the information about the professor who currently teaches it, how long the course is delivered or the course prerequisites and the information like the class times and room number etc. Some general information about the Brock University campus and recent events. For tourists, they can get the athlete's information about who the tourist is interested in, and they can ask the locations, sports, and dates of games. The chat-bot can answer the questions that are available on their Gems Pro profile. Also, the chat-bot can help the tourist to find the transportation to attend the events and get the Ticket purchasing resources etc.

2.4 Software engineering process

We are going to use Scrum. We are making many sprints for our development based on our development teams' velocity. In order to create our product backlog and sprints. The leader which represents the product owner, leader will make a product backlog base on the team then split it into sprint backlog. Scrum master will arrange daily scrum meetings and make sure our development is on the right track. After every sprint, the development team demonstrates to all team members what they have completed, and each team member needs to test the production to check if it has achieved our requirements. Then we will have a sprint review and retrospective together, to deal with existing problems and determine what can be improved for the next sprint.

2.5 Challenge

The challenge that we are facing are:
1. Chatbot can handle multi-questions when the user ask more than one once, and find the related answers.
2. Keep the chatbot system working in a security and safety environment, prevent leaking message to others.
3. The chatbot system must be maintainable and keep update the database on time.find a way to follow it up in a proper time and reduce the user's waiting time.
4. Chatbot system must accurately process and analyze the question from the users by Natural Language Processing, and find the optimal data.
5. Chatbot must be able to detect any minor mistake such as spelling misktake or initialism to prevent the misunderstanding.
6. Increasing the reliability of the product, it needs to be stable(no crash) under things such as internet disconnection or unusual input.
7. While internet disconnection, Chat-bot can still answer simple questions.

3 Version Release

We are going to use Github to control all the Chatbot Version, report, record of meeting, record of Sprint meeting and all the related documents.
Link to the repository: https://github.com/COSC-4P02/COSC4P02Project

4 Timetable

Week of	Goals for completion
Jan 10	• Understand the requirement • Determine the common goal • Find out the potential problem • Finish project proposal (Due: Jan 17)
Jan 17	• Generating user stories • Base on user stories and requirement create product backlog • Setting each sprint and create sprint backlog
Jan 24 & 31	• Creating the Product Backlog and Sprint Backlog (Due: Jan 24) • Begin development • After first sprint, having a first sprint review • Catching existing problems, improving the next sprint
Feb 7 & 14	• Second sprint begin development • Sprint review and find issues
Feb 21 & 28	• Testing prepared first version of Chat-bot • Release first version of Chat-bot • Sprint review • Creating progress report I (Due: Feb 28) • Third sprint begin development
Mar 7 & 14	• Fourth sprint begin development • Sprint review
Mar 21 & 28	• Testing prepared second version of Chat-bot • Release second version • Sprint review • progress report II (Due: Mar 28) • Fifth sprint begin development
Apr 4 & 11	• Testing final version • Sprint review • Release the product • prepare the presentation(10mins pre + 5mins QA)
Apr 18 & 30	• Final Demonstration • Presentation • Report