BRIGHTSPACEBOT

Team 14: Product Backlog

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Problem Statement

Many college students utilize the online platform, BrightSpace, for accessing class content and managing assignments: such as downloading lectures, documents, and checking due dates. The BrightspaceBot aims to automate these redundant and time consuming tasks, so that students are well prepared for their classes. Aside from automating tasks, BrightspaceBot also provides a chat system for users to interact and get answers to the queries from the bot and a management system for BrightSpace notifications to prevent unnecessary distractions.

Background Information

Audience: University students using BrightSpace need to invest time to download course files and manage assignment deadlines for every course they take. Although these kinds of tasks are not difficult, it is a repeated task for every student; hence, automating these simple tasks is needed for students to help them spend more time focusing on the actual course works while the BrightSpaceBot can take care of the easiest tasks.

Similar Platforms: Pulse, which provides students access to brightspace contents from their mobile devices. Brightspace email notification system, where notifications can be set where users get notified about sections that get updated by their professor, due dates that are approaching, etc.

Limitations: Pulse has a complicated process to achieve some common tasks which requires time for users to familiarize with, such as adding events to third party calendars and downloading files from brightspace. BrightSpace email notification system has notifications all come at the same time and students end up with multiple emails spamming their inbox at the same time. Our product

intends to automate complicated processes with simple commands through Discord or email, and simplify and organize notifications.

Requirements
Functional:
Basic Functionalities:

1. As a student, I would like to set up my Brightspace account with BrightSpace Bot so I can automate cumbersome tasks.
2. As a student, I would like to be able to connect (authenticate) my Brightspace account to BrightspaceBot so that I can use its automated services.
3. As a student, I would like to configure my bot through an intuitive website so that I have BrightspaceBot integrated with my favorite utility apps.
4. As a student, I would like the bot to have a simple installation process so that I won't get lost on setting up my bot.
5. As a student, I would like to register for an account on the website so that I can configure a bot.
6. As a student, I would like to log into the website so that I can change the settings on the bot.
7. As a student, I would like to update my personal information such as my major on the website, so that the bot can be better personalized.
8. As a student, I would like to configure whether I want to interact with the bot through email, discord, or just the website itself so that I can easily change the bot settings after initial configuration.
9. As a student, I would like to update the destination I want my files to be downloaded, so I can be flexible in where I want my files to be stored
10. As a student, I would like to customize the amount of notifications I get from the bot so the service does not distract me from my work.
11. As a student, I would like to specify the type of notifications I get from the bot (section being updated, grade updated, course announcements, etc.) so that I only get the notifications I want.
12. As a student, I want my notifications to be separated in different text channels on Discord, based on the type of notification, so the Discord Channel does not get cluttered
13. As a student, I want to be able to specify if I want all BrightSpace Bot emails to go to a specific folder so my general inbox is more organized.
14. As a student, I want to be able to choose my bots name, if desired, so my experience with the bot is more friendly and conversational.

Automated Tasks:

1. As a student, I would like the bot to sync the due dates of my upcoming assignments with the calendar of my choice so that I know what assignments I have due and when.
2. As a student, I would like to have the upcoming quizzes for a class integrated into my calendar of choice so that I know when assessments are.
3. As a student, I would like to have office hours for the classes I select to be integrated into my calendar of choice so that I don't miss office hours.
4. As a student, I would like to have any discussion posts that are due to be marked as an event on my calendar so I don't forget to do them.
5. As a student, I would like to easily search for a specific student in my class so I can see if I know my peers in the class I am enrolled in.
6. As a student, I would like the bot to prioritize which class to focus on based on grades and assignments that are due soon so that I can utilize the limited time I have.
7. As a student, I would like the bot to compare class schedules with other Brightspace users to suggest potential study groups so that I have the option to work with other students.
8. As a student, I would like to have my files from brightspace to be downloaded to a location of my choice automatically by a schedule or manually so that I can have class material ready before class starts.
9. As a student, I would like the bot to organize the course files when downloading on my local device or shared drive.
10. As a student, I would like the bot to download different types of files by different schedules so that my computer won't be overwhelmed by files I don't need immediately.
11. As a student, I would like the bot to mark the default sections on a BrightSpace course as read (check mark appears) so that they don't show up as unread and accurate progress of the course is shown.
12. As a student, I would like the bot to be able to rename the files the bot downloads for my courses to names that I specify so I can sort files to my liking.
13. As a student, I would like the bot to archive past assignments so that my folders are always clean and organized.

Chat System:

1. As a student, I would like the bot to understand the sentences I type without having to explicitly write certain commands so that I can use the bot quickly and easily
2. As a student, I would like to ask the bot what my upcoming assignments are in order to prepare myself for classes so that I don't have to spend time going through the Brightspace modules to find an answer.
3. As a student, I would like the bot to tell me if I have any upcoming exams or quizzes that I haven't completed yet, so I don't forget to take them.
4. As a student, I would like to change any configuration settings I need through the bots chat system so that there is flexibility in terms of how I want to change certain settings (not having to always use the website if I don't want to).
5. As a student, I would like the bot to suggest classes I should be focused on based on factors like grades, unsubmitted assignment, deadlines, so I know where to spend my time on
6. As a student, I would like to ask the bot which weeks have the most assignments due so I can better plan out my time
7. As a student, I would like to ask what my overall points received are in all my classes so I don't have to spend time going through the modules and finding that information
8. As a student, I would like to know what my current letter grade in a class is so I know what my progress is like
9. As a student, I would like to know if a grader has provided feedback on an assignment so I know why I received a certain grade.
10. As a student, I would like to know what the feedback a grader has provided so I can easily see what the comments are and what I need to improve on.
11. As a student, I would like the bot to provide me with quick links to the module page that I want to visit, so I don't have to spend time clicking through the modules to find them.

Proactive Notifications:
1. As a student, I would like to configure how frequently I want to have notifications from BrightSpace Bot
2. As a student, I would like to be able to get notifications from classes before the class starts so that I am prepared to attend the class.
3. As a student, I would like to be able to get notifications daily so that I can be up-to-date about my classes.

4. As a student, I would like to know if my professor has uploaded a lecture to Kaltura Media Gallery for the course so I can complete other tasks while that is being set up.
5. As a student, I would like the bot to tell me when an instructor has updated or added a new section to the brightspace course so I can stay up to date with the changes made.
6. As a student, I would like the bot to remind me of any upcoming discussion threads I need to post on.
7. As a student, I would like the bot to remind me that after I post to the discussion thread, to reply to other students' post so I am engaging with peers in my class
8. As a student, I would like the bot to notify me if my grade has been updated so I don't miss important updates.
9. As a student, I would like to configure the bot to notify if there are any recorded lectures

Non-Functional

Accuracy

We plan to let the Bot respond to users' commands which do not need to be exact commands but at least imply their request for the Bot. So that the actions of the Bot are clear even with human generated sentences. It should also send notifications at accurate times regarding course schedules. Currently it sends notifications at assigned times which does not consider students' class times which is inefficient for the users. Finally, we want the bot to accurately save and download the course files to designated drives or devices.

Efficiency

We want our service to allow students to make better use of the limited time they have, hence our goal of automating the cumbersome tasks that Brightspace has. One of our main goals is to reduce the overall time spent by users to go through the various modules and do the tasks they need. We want our response time for our bot to be instantaneous, at most 5 seconds, so that students do not have to wait for their tasks or queries to be executed. A specific component that falls under efficiency is also the feature where the bot will download a file whenever an instructor updates the course page.

Security

Our bot remembers the users' credentials in order to automate the login process for efficiency purposes . However, it has a risk of leaking credentials and allowing strangers to access the users' brightspace account. For enhancing security, we would store credentials locally in an encrypted form. Also, we will allow the user to choose to re-login every month or week to prevent malicious access to user accounts.

Flexibility

Another goal of our service is that we want our bot to be run on various platforms. Currently, the plan is to have our services be run via Email or Discord. This means that any queries, updates, notifications, etc. would all be conversed through the platform of their choice. If the user specifies Email, then the bot would converse through Email threads. Otherwise, it will create a Discord channel with the user and the bot and communicate through there. This way our bot is available for use to those who are not on Discord, but still want to have an efficient Brightspace experience. When the user initiates BrightSpace Bot for the first time, they will do so through a web page that allows them to set their configuration settings. Settings include which platform to communicate through, how often to display proactive notifications, where to download files to.