**CALL FOR CODE 2020 SUBMISSION**

**Team Name:** TechWiz

**Project Name:** Study Mate

**Solution Brief Overview:**

Our solution is mainly about improving remote education in this time of crisis. It can be implemented in schools to help students with tracking homework, class schedules etc using a simple chatbot.

**Solution Description:**

Remote education or distance education refers to a system of education where the student and teacher need not be present in a traditional classroom setting but at the same time, promote effective education. In today’s world of Covid-19, remote education is a necessity and our solution tries to improve the current system. We propose an interactive chatbot which can be used by students to know when homework in a particular subject is due. It can be used to keep track of the online classes scheduled by the teachers.

A student could ask their teacher these questions, but a chatbot implementation just makes the entire process much more interactive and accessible 24/7. We have also integrated our chatbot with Slack, which is a common software used to create workspaces for interaction regarding a variety of issues. A teacher can create a workspace with all the students and all the students can access this chatbot which has been integrated with this particular workspace.

Since the chatbot is always online, the student can use it at any point of time. For example, suppose the student asks, “What is Monday’s homework?”, the chatbot would then ask the student what subject they want to know about. Depending on the student’s reply, the chatbot replies with that subject’s homework.

The chatbot is also ready with a picture of the timetable, if the student wants to know about the classes. The student just needs to ask a question ranging from “what class do I have tomorrow?” to “show me the timetable for the upcoming week”. If the chatbot recognizes the keywords, it will reply with the picture.

These are currently the only two features of our chatbot but we plan to expand it over many more classes and connect our chatbot to a proper dynamic database in which teachers can update homework everyday and those changes can be reflected back in the chatbot. The chatbot can also help clear doubts or queries in the future. These are all the functionalities we plan to implement in our solution in the near future.

The steps followed by our chatbot are:

1. User invokes StudyMate chatbot in slack and asks it a question
2. The Slack app calls the Watson Assistant hosted on IBM cloud.
3. Watson Assistant uses various techniques to decode the question by identifying the intents and entities of the question.
4. Watson Assistant replies to the Slack app with the matching dialog.
5. The Slack app displays this dialog as output to the user.

The process is repeated once a student asks another question.

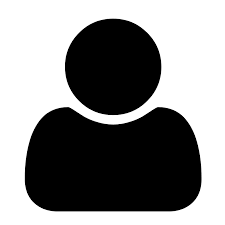
**Solution Architecture:**

The entire process is illustrated in flowchart or roadmap below.

**USER INTEGRATION CLOUD**

Slack app refers Watson Assistant for reply

User asks the chatbot on slack a question

**  **

Reply is displayed to the user on Slack

Watson assistant analyzes question and sends a reply

*Figure: Working of Study Mate chatbot on Slack*

**IBM Cloud Services/Systems used:**

1. Watson Assistant

**Sample Output on Slack:**

