IPro 497 – Product Direction Document

Problem statement

Please provide two problem statements. They are the same problem but take two passes at it.

- **Teachers frequently take the help of Teachers Assistants to answer common questions, take attendance, and provide learning assistance. Time constraints and workload can often prevent TAs from ensuring adequate support to all students. A virtual assistant will benefit students, professors, and TAs by saving time and providing answers to several frequently asked topics. (NLU)**
- Teachers struggle to keep track of which students are in class, and many of them waste valuable class time taking attendance. Automated procedures can ensure proper efficiency. (maximum teaching time)

Customer

- Students

Customer Demographic

- 18 and above
- College environment

Customer Persona

- Lazy, Multi-tasker, very busy (Lots of clubs, hw, commitments, etc), forgetful, curious minded

Other customer(s) or stakeholder(s)

- Teachers/Teaching Assistants
- Teachers without TAs
- Institute/Investor funding the project
- People incharge of web application
- Institutions

Application type (web app, mobile, website, native client, …)

- Interactive web application (Flask web framework)

Tech stack

Client Tech: Html, CSS

Server Tech: Python, Flask (Python web development), JSON (With pre types questions from teachers), torch, Google cloud for potential hosting at end

Top Application Capabilities (name at least 5)

- AI assistant chatbot (Quick Response to students general questions)
- Automated grade reports
- Automated Tutoring appointments/reschedules
- Sends out summary reports of questions asked to the bot to the professor.
- Use natural language processing to scan the pdf

Top Two to Three Scenarios

Scenario #1 (example)

Our hero us Bob is a busy student and wants to maximize his time to study and have fun, but also needs to have clean clothes to wear. When Bob heads to the dorm laundry he sees there is a sign and QR code for laundry minion. He downloads the laundry minion app and scans the QR code for the washing machine. He adds funds to laundry minion and uses the app to pay for the load from his phone and start the washer. Bob heads back to study location and get notifications when his laundry is 10 minutes, 5 minutes and finally one minute from done. No more finding his clothes strew all over the place or standing around waiting for loads to finish.

Scenario #2 (example)

Bob pops his clothes in the dry and scans the dryer QR code with Laundry minion. He adds funds to his laundry minion card and pays for the dryer. Laundry minion tells him and when his clothes are 10 minutes, 5 minutes and 1 minute and tells IF the clothes are dry. If they are not dry, Bob can remotely add more dryer cycles to dry his clothes. No more finding his clothes strew all over the place or standing around waiting for loads to finish.

Your Scenario #1

Mike is having difficulties in his physics class. He gets very confused about the material and tries to reach out to the TA. The TA is overloaded with questions and Mike receives an email from the TA saying that she will respond to all emails as soon as she can. He does not hear back from the TA for 2 days and decides to use the AI TA chat bot to help him understand the material in physics.

Your Scenario #2

John has missed a couple of lectures due to covid and now he has fallen back in his course. He also hasn't had time to attend TA office hours due to having other online classes during that time. So, this allows him to use the AI TA chat bot to get caught up with all questions he needs answered.

Your Scenario #3

Professor Wick is feeling a bit sick and needs time off from work. AI assistant chabot can use NLP to scan the document that the professor has uploaded. This will allow an AI assistant to cover the missing lecture that the student may have missed.

Team Members

Name	Location	Time zone offset from Chicago (Chicago is 0 offset)
Raj Patel	Chicago	0
Dhaval Patel	Chicago	0
Inciya Jafri	Chicago	0
Rutvik Patel	Chicago	0

Team Working Agreement

- We will use Github and keep items updated as progress is made
- If we need to meet outside of class we have found a mutually agreeable time: Weekends at 12:00 am
- If we need to meet outside of class we will use the following tool/tech for meetings: Zoom/Google meets
- When we are not meeting together we will user the following tool/tech for communications: iMessage
- Be nice to each other.
- If someone does not complete a task they should try to complete it by the next meeting.
- Before putting up a task in the kanban board, as a group we all should decide on the workload on a scale of 1 - 10. This will ensure that everyone has a task with equal amounts of work.