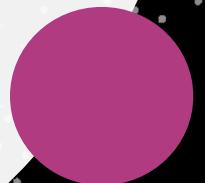


The Herts Bot



What is it?

- The Herts Bot is essentially a chatbot which is a piece of artificial intelligence (AI) software that can mimic a discussion with a user in natural language via messaging apps and websites etc.

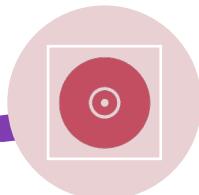
Why are they beneficial?



They provide a 24/7 support system without the help of human assistance.



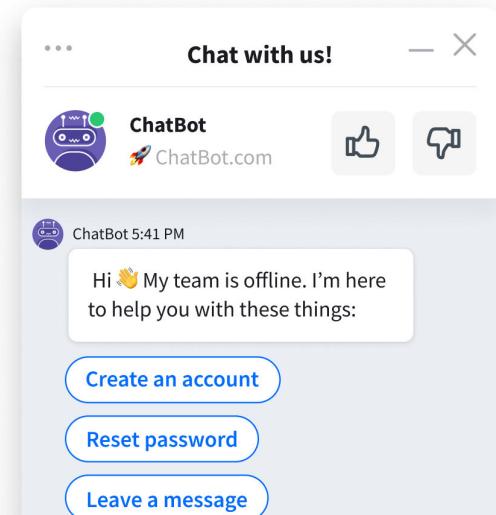
It reduces the cost spent on customer service



Helps cater a huge amount of target audience at the same time.

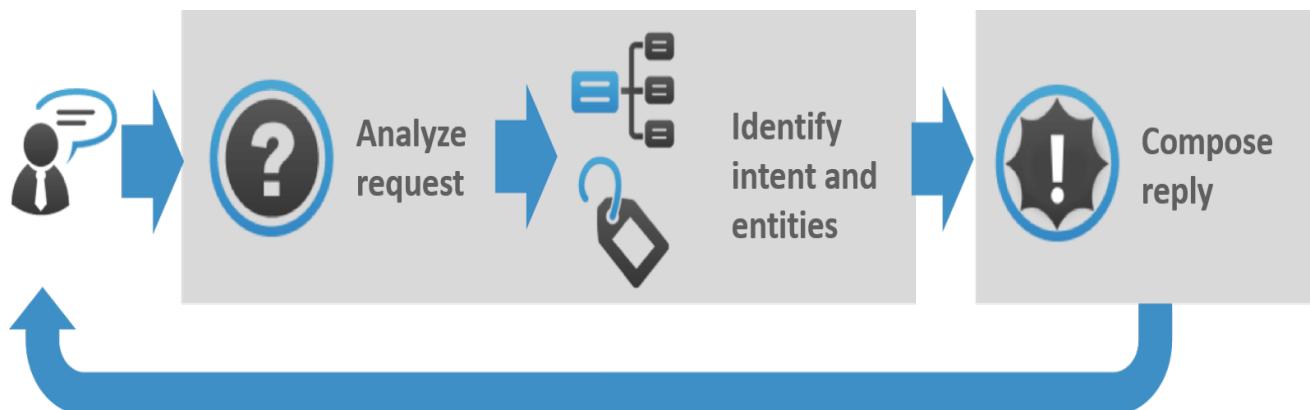


Chat bots only need to be trained once and can be personalized



How does a Chatbot work?

- There are two main components to a chat:
 - **User Request analysis** – the chatbot extracts the human input and analyzes the user's intent and extracts relevant sections of the data provided. If the user's data cannot be understood by the chatbot, consequently it would mean the chatbot cannot provide an answer.
 - **Returning the response** – after the given data has been identified the chatbot then provides the most appropriate response for the user's request. This could be in the form of a predefined text, contextualized information from a trusted source or a simple question that helps the chatbot understand the user's request



[https://www.expert.ai
/blog/chatbot/](https://www.expert.ai/blog/chatbot/)



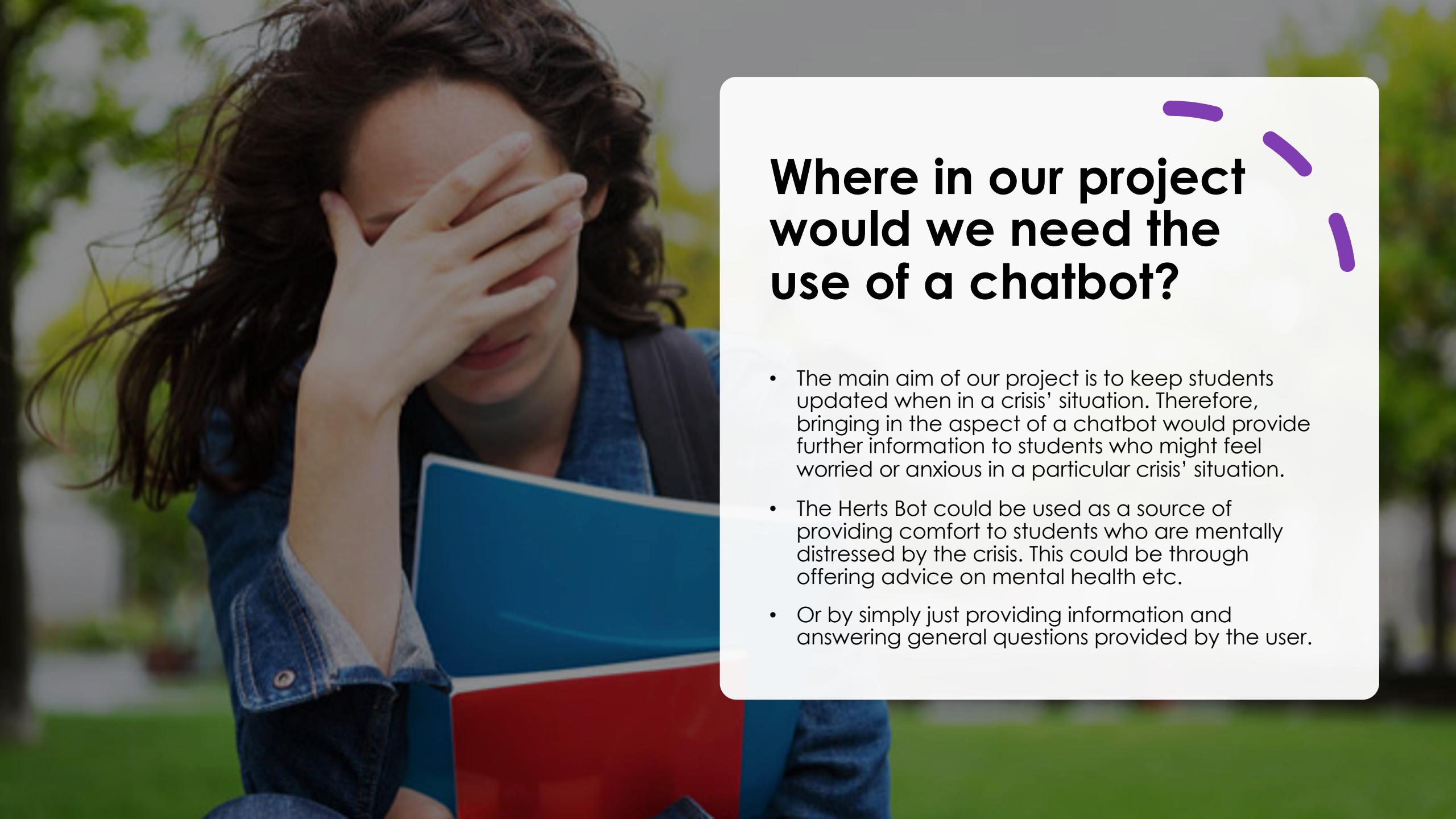
What aspects of computer science is needed?

- **Artificial Intelligence** – is used in chatbots to automate the mundane and repetitive processes involved. The only real issue lies when a demand is made that is too advanced for the chatbot.
- **Data Analysis** – Chatbots may use a variety of data from different sources. The data should be of high quality when chatbot is developed. Using poor quality data it will limit the chatbots functionality.

What ideas do we need to consider for our chatbot service?

- **Message interpreting** – Some user's may write short messages, others long and others may use colloquial language. Therefore, in our chatbot service it is crucial to caution the user to use general terms in order to process the request. There should be an algorithm to piece together the message and compare it with possible answers based on the context.
- **Machine to human transition** – If human advice is needed in our chatbot service, the user would be given further contact details of the appropriate individuals who will be able to further assist them.
- **Personalization** – the bot must be able to save user history intact so it could calculate ways of adapting to the user from using previous texts with other users. Through further trial and error's, the chatbot should be able to calculate the existing requests and tendencies among user's resulting in less errors.
- **Chatbot Style** – the chatbot should feel as if its interacting with the user and this could be through the chatbots attitude or way talk.
- **Data Gathering** – the chatbot should be able to help users with predefined answers set by the developer. It could also take the user to trusted sources so they could read and find out information themselves.
- **Natural Language Processing** – we as the developers should be able to understand the limits of Natural Language processing. Main issue being miscommunication where the chatbot can take an incomprehensive set of commands based on keywords and then form a reply that's useless to the user. This issue can be resolved by constructing decision trees of the most requested and frequently asked questions.





Where in our project would we need the use of a chatbot?

- The main aim of our project is to keep students updated when in a crisis' situation. Therefore, bringing in the aspect of a chatbot would provide further information to students who might feel worried or anxious in a particular crisis' situation.
- The Herts Bot could be used as a source of providing comfort to students who are mentally distressed by the crisis. This could be through offering advice on mental health etc.
- Or by simply just providing information and answering general questions provided by the user.

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