# SBE 404A - NETWORKING PROJECT

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Video:

GitHub Repository:

# Medical Chat Bot - Your Virtual Doctor

In this project we built a "Medical Chat Bot". It asks the user 9 questions about symptoms he/she may have, the user answers using 2 button Yes/No. The GUI was built using PyQt5.



We built a server using socket library in Python that allowed us to generate communication with the clients using TCP/IP connection. The GUI and the server handle the connections properly and handled.



When a question is answered, the message is sent from the client to the server using that communication and processed at the server until all answers are collected.

When all answers are collected, a decision tree model, which we built ourselves, is run with the input of the processed answers, it responds with a message that tells the possibility of an illness and a recommendation to see a doctor, take a medication, take some rest, etc.



Multiple clients can access to the server, each client has its own thread (connection) and it's totally independent of the other clients' connections to the server.

A client's connection is timeout enabled, which means if the server didn't get a response from you "the client" for a specified time, which is specified in our case 20 seconds, the server closes the connection with that client and a pop-up message appears telling the user that the connection was closed as he/she was IDLE.
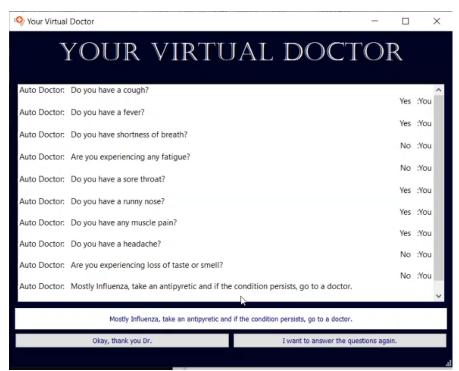
# TESTING

1) All answers are Yes



2) Yes/Yes/No/No/Yes/Yes/Yes/No/No

3) No/No/No/Yes/Yes/No/No/No/No

Your Virtual Doctor — □ ×

# YOUR VIRTUAL DOCTOR

Auto Doctor: Do you have a cough?
No :You

Auto Doctor: Do you have a fever?
No :You

Auto Doctor: Do you have shortness of breath?
No :You

Auto Doctor: Are you experiencing any fatigue?
Yes :You

Auto Doctor: Do you have a sore throat?
Yes :You

Auto Doctor: Do you have a runny nose?
No :You

Auto Doctor: Do you have any muscle pain?
No :You

Auto Doctor: Do you have a headache?
No :You

Auto Doctor: Are you experiencing loss of taste or smell?
No :You

Auto Doctor: Just rest a bit.

Just rest a bit.

| Okay, thank you Dr. | I want to answer the questions again. |

4) All answers are No

Your Virtual Doctor — □ ×

# YOUR VIRTUAL DOCTOR

Auto Doctor: Do you have a cough?
No :You

Auto Doctor: Do you have a fever?
No :You

Auto Doctor: Do you have shortness of breath?
No :You

Auto Doctor: Are you experiencing any fatigue?
No :You

Auto Doctor: Do you have a sore throat?
No :You

Auto Doctor: Do you have a runny nose?
No :You

Auto Doctor: Do you have any muscle pain?
No :You

Auto Doctor: Do you have a headache?
No :You

Auto Doctor: Are you experiencing loss of taste or smell?
No :You

Auto Doctor: You are totally fine :)

You are totally fine :)

| Okay, thank you Dr. | I want to answer the questions again. |