Diabetes Prediction App

User Manual

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Table of contents

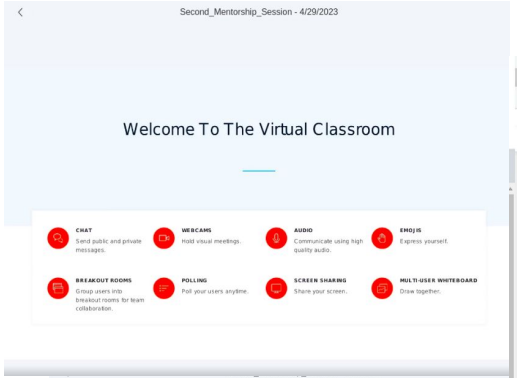
Acknowledgements

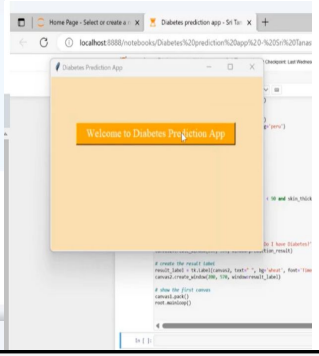
- A small vote of thanks for all who have helped me in this journey of App Development
- My parents- Kishore Raghupathi and Rupa Raghupathi
- Mentors- Mr Avishek Das, Mr. Ken

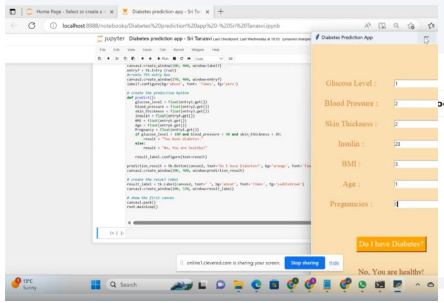
About me

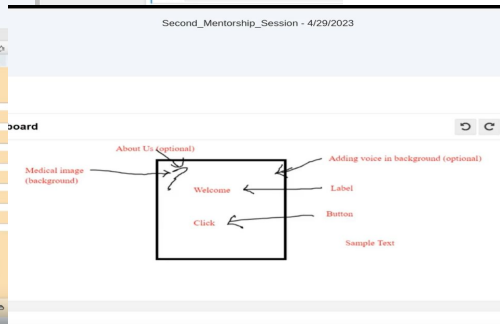
- Hello! I am Tanasvi Raghupathi. I am currently in Year 12 doing maths chemistry and economics. In my free time I enjoy watching movies, listening to music and I also love to draw and paint.
- During my A-levels, I developed an interest in Artificial intelligence and was very curious to know about how chatbots.
- So when I heard about this course, I enrolled myself in order to gain more knowledge about AI and its applications.
- I am also passionate about Data science and would like to do economics with data science at university.

About My Internship Journey with Clevered..









- My experience with Clevered was very knowledgeable and well informed. I learnt many things which I had not known before about AI and Data science.
- So for example I didn't know what decision tree was. But now I understand that decision tree a tree-like structure that represents a series of decisions and their possible consequences.
- One of many things that I enjoyed learning was to design the GUI tkinter window for my project because I was able to use my art and creativity skills here.
- I am happy because I can now use my knowledge gained from this course to create apps like diabetes prediction, quiz generator and many more.
- I really enjoyed my advance AI internship course as it had assignments that were not only engaging but also very fascinating to do.

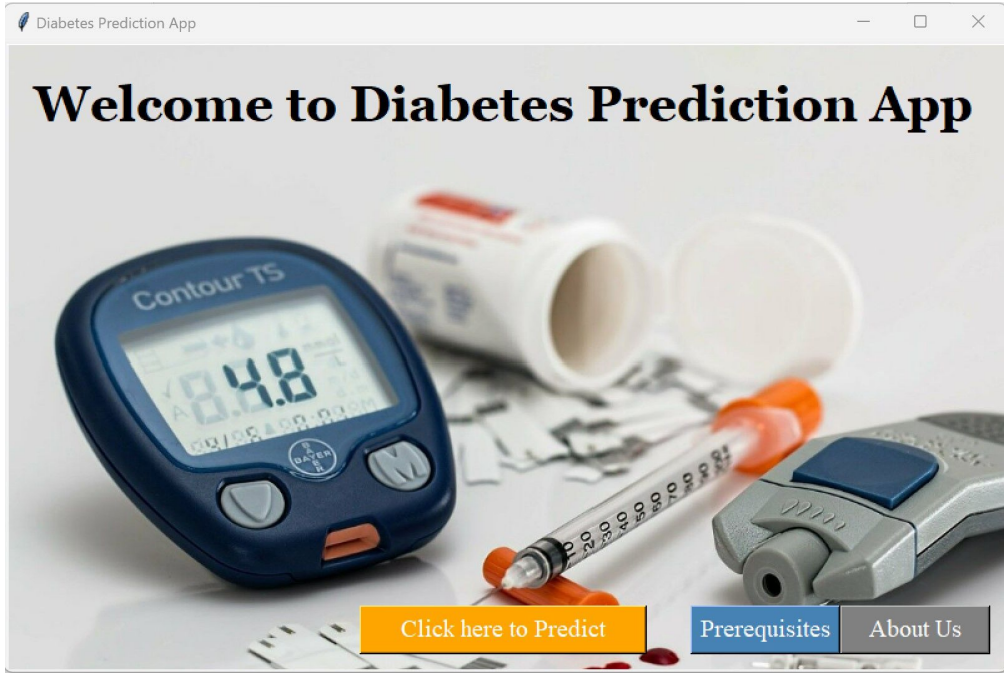
About App

- I created Diabetes prediction App which predicts whether or not a person has diabetes.
- This app first takes all the details of the user and when the user clicks on the predict button, this app predicts the result. This app also provides few links about how to prevent diabetes.
- One limitation is that the database I used consists of patients who were all females who are at least 21 years old.
- I used Jupyter notebook to create the code. I used the GUI tkinter to create my frontend.I used various machine techniques to create the backend such as Exploratory data analysis, data visualisation and machine learning model randomforest.
- This app has many benefits-:

1. Early detection
2. Convenience
3. Prevention

How to use the App

First Page



This is the first page that the user will see.

I created this using tkinter library on jupyter notebook

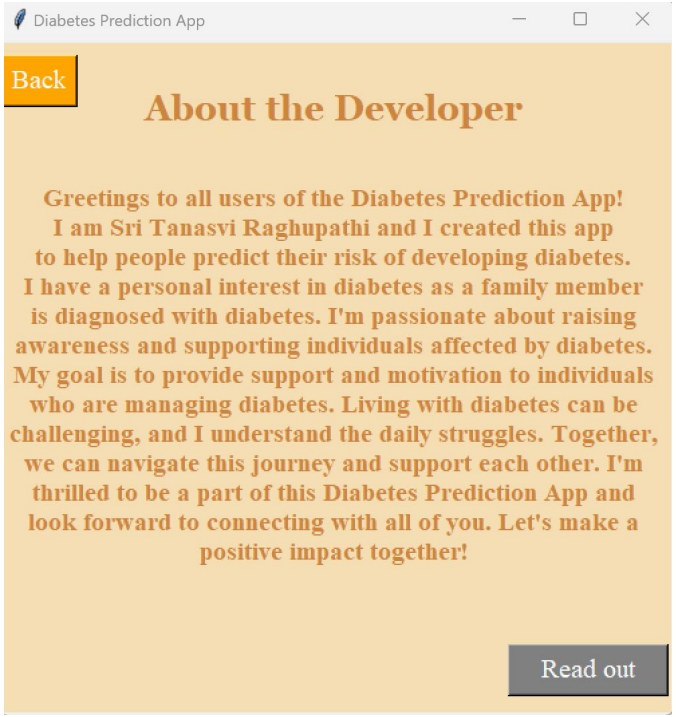
In the main menu, the user can click on the three buttons:

About us button: when clicked on this button talks about the app and me

Click here to predict: this button takes the user to the next window.

Pre-requisites: this button takes the user to the Medical tests page and provides information on the tests required.

‘About us’ page



This page lets the user know about the developer and why this app was created.

This page has 2 buttons:

Back button

Read out button: this reads the text displayed on this page.

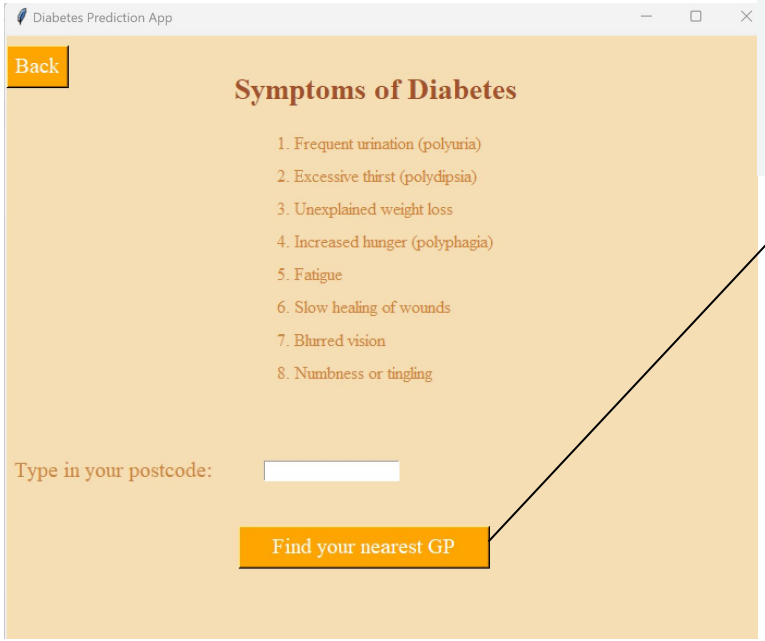
Prerequisites page

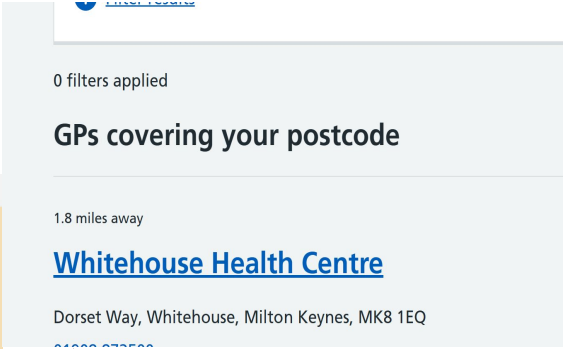
This page gives all the information the user needs to know about the medical tests the user need to take before using the app.

This also has a button 'click to check the symptoms' button

When clicked, the app takes the user to the symptoms page.

Symptoms page



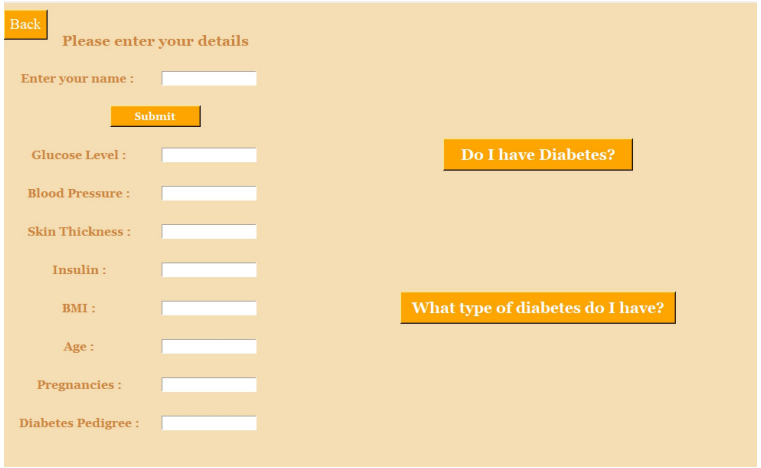


On this page the app shows the symptoms of Diabetes.

I have also added the 'nearest GP' button, which the user can use to find their nearest GP

Type in your UK postcode and click on the 'find your nearest GP' button, the link shown by the arrow opens.

‘Click here to predict’ page



This is the main page of the app and this allows the user to enter their details.

This window has four buttons and 9 entry boxes:

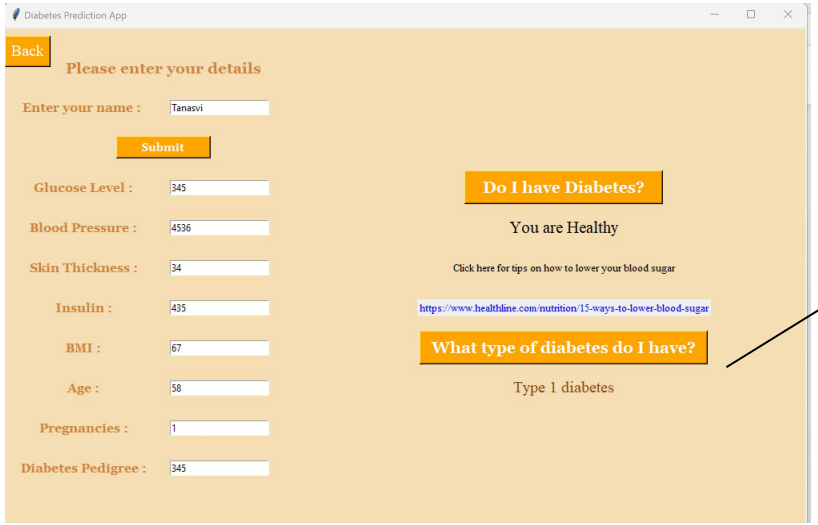
The two buttons:

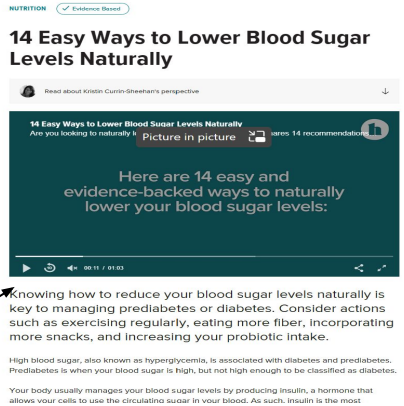
Back button: this lets the user to go back to the previous page.

‘Do I have Diabetes?’ Button: The user can click on this button after entering all the details. This button shows the result on the right side of the second page.

It may show either of the two results:
Result 1 or Result 2

Main page - Result 1





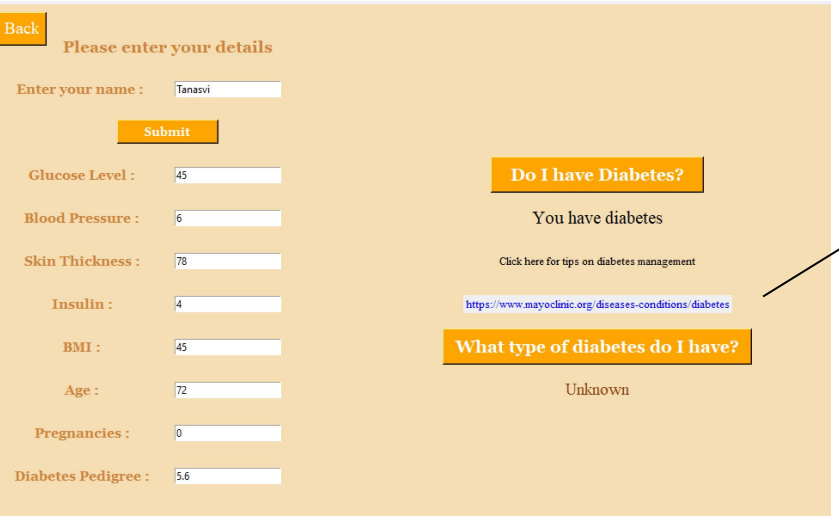
After the user clicks on the button and if the prediction is this:

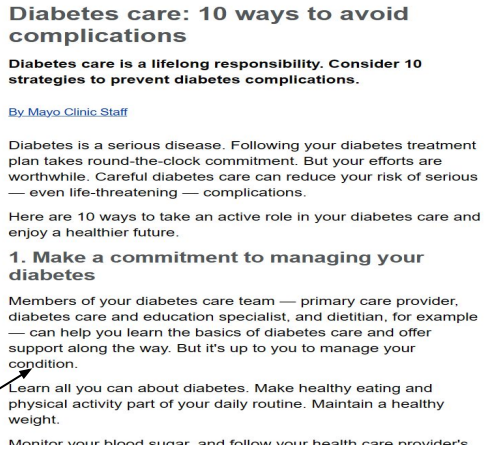
{Prediction for Diabetes: }{[1]}

Then this means that the user does not have diabetes and is healthy. If the user clicks on the label the app reads the result out.

I have also added a link along with the result so when the user clicks on the link it takes the user to the page that is shown by the arrow

Main page - Result 2





Diabetes care: 10 ways to avoid complications

Diabetes care is a lifelong responsibility. Consider 10 strategies to prevent diabetes complications.

By Mayo Clinic Staff

Diabetes is a serious disease. Following your diabetes treatment plan takes round-the-clock commitment. But your efforts are worthwhile. Careful diabetes care can reduce your risk of serious — even life-threatening — complications.

Here are 10 ways to take an active role in your diabetes care and enjoy a healthier future.

1. Make a commitment to managing your diabetes

Members of your diabetes care team — primary care provider, diabetes care and education specialist, and dietitian, for example — can help you learn the basics of diabetes care and offer support along the way. But it's up to you to manage your condition.

Learn all you can about diabetes. Make healthy eating and physical activity part of your daily routine. Maintain a healthy weight.

Monitor your blood sugar, and follow your health care provider's

However, if the result is this then the user has Diabetes. And the link takes the user to a webpage that outlines some ways to manage their diabetes.

I have also added two other buttons:

Once the user types in their name and clicks on the 'Submit' button, the app says Welcome. If the user wants to know the type of diabetes they have they can click on the 'what type of diabetes do I have' button.

Contact

Please reach out to Sri Tanasvi Raghupathi at sritanasvi@gmail.com for any questions/ concerns/ suggestions on the App

Hope you enjoyed my presentation :)

Thank you