## UC SANTA CRUZ Baskin Engineering Computer Science Capstone

# Conversational Chatbot-based Diabetes Assistant



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### Introduction

DiaBuddy is a proof of concept for an expansion to the Glooko® app. We want to make it easier to manage and learn about diabetes.

Oh, what's Glooko®? And why are you doing this?

With Glooko, you can sync, share and review data from a majority of available diabetes devices. Data is displayed in easy to understand charts and graphs. Dia-Buddy lets you access some of these features in an even easier way, through a simple voice interface. It also provides educational resources to help utilise this information.

Huh... how'd you do that?

It's all in a chatbot. You simply ask it to log your blood sugar levels, or ask it for highs or lows in your readings, and it will do that! It's like talking to your Siri or Alexa.

You can also ask questions about diabetes, and it will respond with answers curated from online sources\*. It even recommends articles based on your frequently asked questions.

### How does it work?

A user can type or use voice commands and the bot will respond accordingly. It supports Q&A for most popular questions about diabetes (50+ distinct questions), and voice operated data management (for logging and reading a user's data).



"What's a normal blood glucose level for women?"

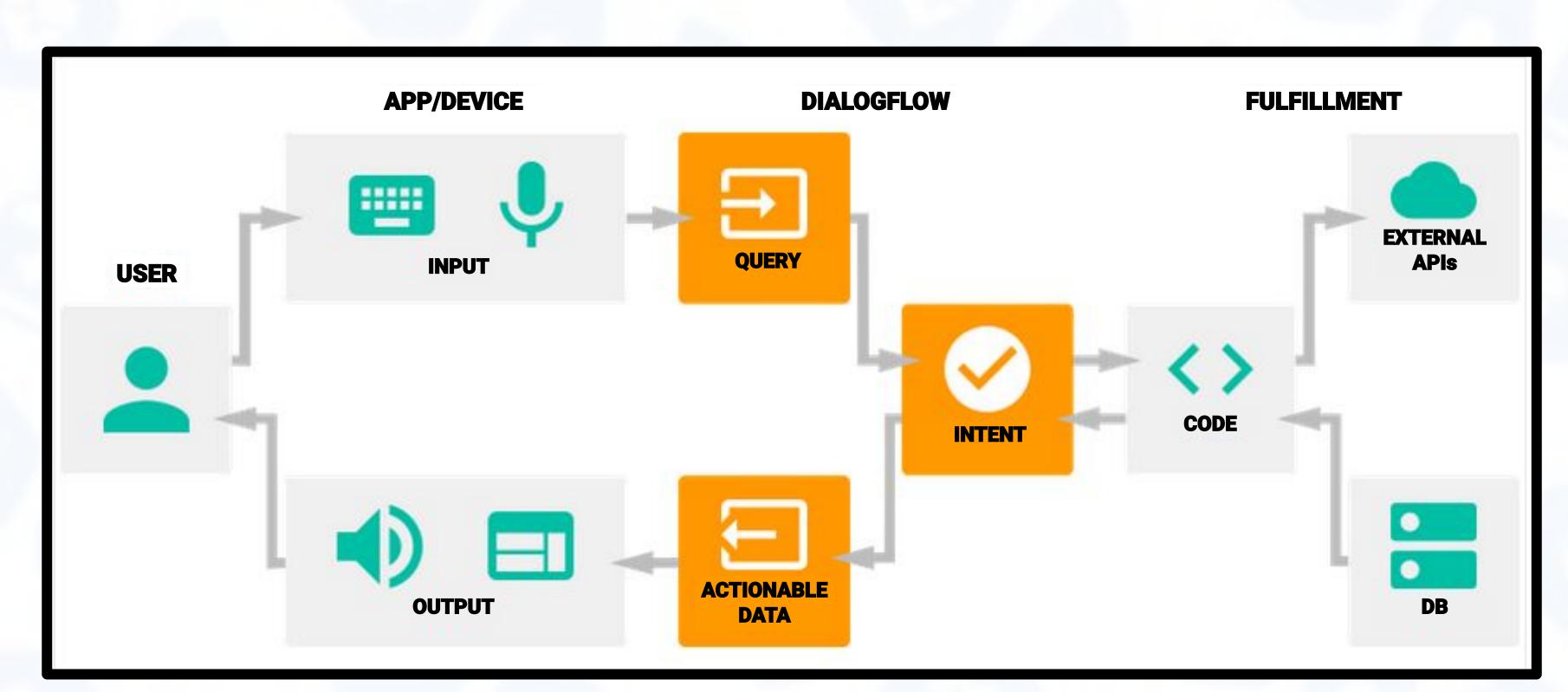


"What was my highest blood glucose level from last week?"



"Recommend me an article on diets."

Additionally, the app features a newsfeed-like educational tab that provides the user with articles. The content of the tab is dynamically updated based on which topics the user asks the chatbot about most frequently.



#### Results

The voice interface allows you to log your blood glucose levels, which previously took 4 clicks, with one sentence. Users can also avoid false information found online by utilizing the EDU tab to have access to reliable articles.

This chatbot prototype provides an excellent foundation for the development of more complex features, due to its easy to use nature and its friendly UI.



Dia Buddy

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