Diagram showing User (box), Chatbot (circle), and Dataset (box) with labeled flows:
- User → Chatbot: Input Question
- Chatbot → User: Display Question
- Chatbot → User: Display Response
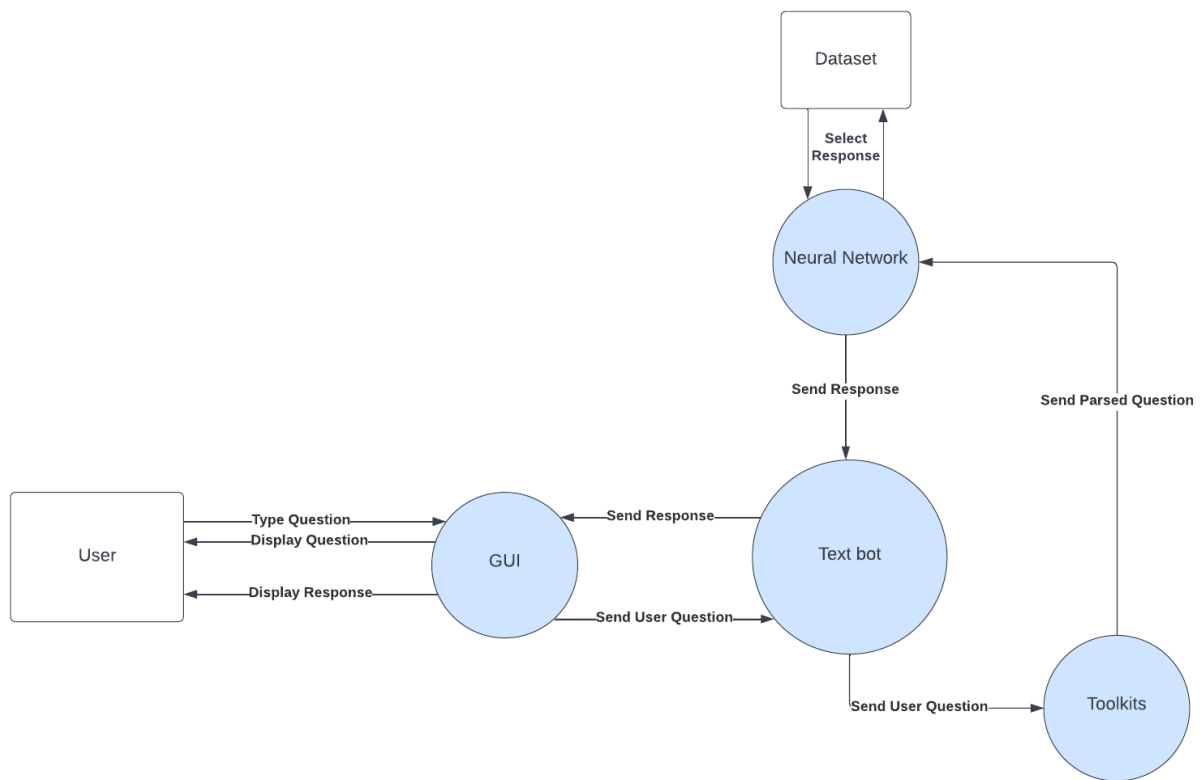- Dataset → Chatbot / Chatbot → Dataset: Select Response

DFD - Level 0:

The level 0 diagram shows a highly abstracted view of our chatbot's functions. The chatbot interacts with two external entities: the user, and the dataset. The chatbot's interactions with the user consists of receiving input, displaying input, and displaying the chatbot's response. The dataset is a file containing a list of keywords and associated responses. Upon interpreting the user's question the bot will select a suitable response from the dataset

DFD - Level 1:

The level 1 diagram is still abstract, but goes into more detail about the main bot's functions and the movement of data. The GUI is responsible for the bulk of interacting with the user. It's responsible for displaying any user and bot input as well as sending or receiving user and bot responses. Text bot is the mediator between all of the major functions. It takes the user questions from the GUI and sends it to be parsed by the toolkits. It then receives the selected response from the neural network and sends it back to the GUI to be displayed to the user. The toolkits include parts-of-speech tagging, named entity recognition, sentiment analysis, and synonym recognition. The job of the toolkits is to parse through the user's question and correct, simplify, or expand certain parts of the question to make it easier to understand for the neural network. Once the neural network has received the parsed user question from the toolkits, its job is to use that information to select an appropriate response from the dataset. The dataset is a file that contains arrays of keywords and their associated responses. Once a response has been selected by the neural network it's sent to the text bot.