**Voice Based ChatBot**

**Source Code Details:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial No. | File Name | Type of Language | Type of File (or File Extension) | Functionality | Dependency |
| 1. | DSAI\_Vbot\_Model\_Training.ipynb | Python | .py  Implemented using OOP concepts | Used to train and save model and other utilities | Input:  DSAI\_Vbot\_Intents.json  Output:  DSAI\_Vbot\_ANN\_Trained\_Model.h5  DSAI\_Vbot\_Label\_Encoder.pickle  DSAI\_Vbot\_Tokenizer.pickle |
| 2. | DSAI\_Vbot\_Streamlit\_UI.py | Python | .py | Used to create voice based chatbot in Web Interface (streamlit). | Input:  DSAI\_Vbot\_Intents.json  DSAI\_Vbot\_ANN\_Trained\_Model.h5  DSAI\_Vbot\_Label\_Encoder.pickle  DSAI\_Vbot\_Tokenizer.pickle |
| 3. | style.css | CSS | .css | Used to describe the presentation of HTML file written using streamlit package |  |

**Run Instructions:**

|  |  |  |  |
| --- | --- | --- | --- |
| Step Number | Run Command | Run Dependency | Run Instruction |
| 1 | Run DSAI\_Vbot\_Model\_Training.ipynb |  | This trains the ANN model and save the model and utilities |
| 2 | Run ‘streamlit run DSAI\_Vbot\_Streamlit\_UI.py’ |  | This runs Voice based chatbot in Web Interface (streamlit). |

**Source Code Steps**

1. DSAI\_Vbot\_Model\_Training.ipynb
   1. Load input data from DSAI\_Vbot\_Intents.json
   2. Extract tags, patterns and response from the input
   3. Label Encode the tags
   4. Tokenize, convert to sequence and pad the patterns with zeros
   5. Train the ANN model
   6. Save model, encoder and tokenizer objects
2. DSAI\_Vbot\_Streamlit\_UI.py
   1. Uses streamlit to create webpage
   2. Load model and utilities
   3. Recognize user voice input
   4. Convert the voice input to text
   5. Preprocess the text using the loaded utilities
   6. Model predicts the output text response (randomly) for the text
   7. The text response is converted into voice
   8. The voice is played