**Project Report: Chatbot for University Admission Questioning Answering**

**1. Introduction**

The purpose of this project is to develop a chatbot that assists prospective students with their questions regarding university admissions. The chatbot utilizes a neural network for natural language processing and is implemented using the Flask framework. This report provides an overview of the project, its objectives, methodology, and key findings.

**2. Objectives**

The main objectives of the project are as follows:

- Develop a chatbot capable of understanding and responding to questions related to university admissions.

- Utilize a neural network to process natural language and provide accurate and relevant answers.

- Implement the chatbot using the Flask framework to create a user-friendly web interface.

- Train the neural network using a dataset of questions and answers related to university admissions.

- Evaluate the performance of the chatbot in terms of accuracy and user satisfaction.

**3. Methodology**

The project was divided into the following key steps:

**Step 1: Data Collection**

A dataset of questions and answers related to university admissions was gathered. The dataset covered a wide range of topics, including admission requirements, application deadlines, financial aid, and program details.

**Step 2: Data Preprocessing**

The collected dataset was preprocessed to clean the text, tokenize sentences and words, and perform lemmatization. This step involved using the NLTK library for natural language processing tasks.

**Step 3: Neural Network Development**

A neural network model was developed using the Keras library. The model consisted of multiple layers, including input, hidden, and output layers. The architecture was designed to handle the classification task of mapping input questions to appropriate answers.

**Step 4: Training and Evaluation**

The neural network model was trained using the preprocessed dataset. Training involved feeding the model with input questions and their corresponding expected answers. The model's performance was evaluated using metrics such as accuracy and loss.

**Step 5: Flask Implementation**

The Flask framework was used to develop a web application that provides a user interface for the chatbot. The interface allowed users to input their questions and receive responses from the chatbot.

**4. Results and Findings**

The developed chatbot achieved satisfactory results in terms of accuracy and user experience. The neural network model, implemented using the Keras library, demonstrated good performance in understanding and generating relevant responses to a wide range of admission-related questions. The Flask implementation provided an intuitive and user-friendly interface for users to interact with the chatbot.

**5. Conclusion**

The project successfully accomplished its objectives of developing a chatbot for university admission questioning answering using a neural network (implemented with the Keras library) and the Flask framework. The chatbot, powered by the neural network model, demonstrated the ability to understand user questions and provide accurate and helpful responses. The project findings highlight the potential of combining natural language processing techniques with neural networks to build effective conversational agents. Future work may involve expanding the chatbot's capabilities, integrating it with backend systems for real-time data retrieval, and conducting further user testing to enhance its performance.