

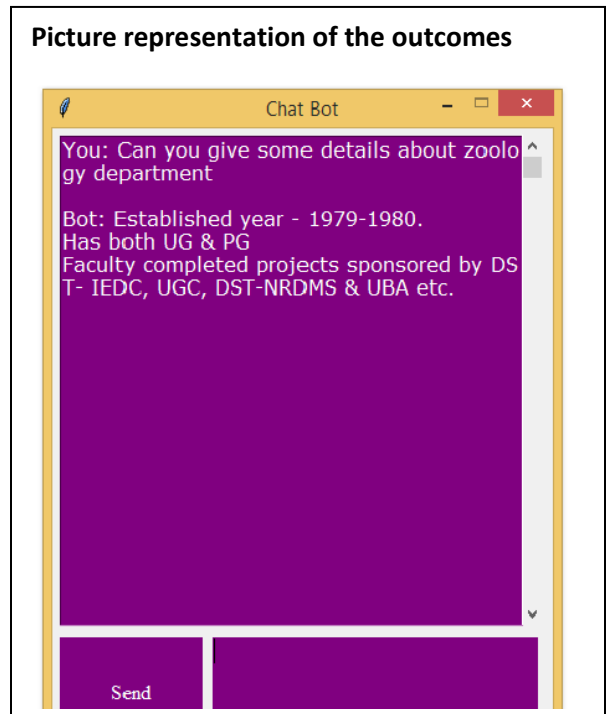
### An Intelligent chatbot for College Enquiry

Name of the PI	V.Santhana Lakshmi	Sanctioned Year	2019
Name of the Co PI's		Amount Sanctioned in Rs.	70,000

#### Project outcomes:

- ✓ Chatbot with graphical user interface is created with the ability to answer the queries related to admission, about the college, departments and the courses provided.
- ✓ The contact details of the people who use the chatbot are collected and stored in an excel file
- ✓ Chatbot has been designed using python
- ✓ Graphical user interface of chatbot was designed using Tkinter library.
- ✓ It was designed using the concepts of Machine learning and NLP(Natural Language Processing).

Picture representation of the outcomes



For more information, please contact:  
[santhanalakshmi@psgrkcw.ac.in](mailto:santhanalakshmi@psgrkcw.ac.in)

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- ❖ Publications: 2 (Submitted, Waiting for reply)
  - ❖ Conference/ Seminar/ Workshop:
  - ❖ Books:
  - ❖ Any other achievements:



For more information, please contact: [santhanalakshmi@psgrkcw.ac.in](mailto:santhanalakshmi@psgrkcw.ac.in)

The project titled “**An Intelligent chatbot for College Enquiry**” is developed with an objective of creating a chatbot that can answer the queries raised by the people about the departments, college, admission and courses provided in the college. Chatbot is an application that acts as a conversation agent, simulating human communication. Machine Learning and Natural Language Processing plays a major role in developing chatbot. This project aims at creating a retrieval based chatbot for answering queries with regard to admission in the college. Retrieval based chatbot gives best response to query from the predefined dataset. The advantage of retrieval based models is they give accurate response since it is defined already.

Dataset used includes three hundred frequently asked questions their intent and responses with regard to admission, departments and courses provided in the college. They are stored in excel file. The dataset set is simulated based on college needs. Four types of intents were chosen. They are i) College ii) Departments iii) Courses iv) admission. Every intent has few sub intents. For example the intent “departments” has 36 sub intents since there are 36 departments in the college. Machine learning algorithms such as Decision tree learning and Neural Network are used for building a model to identify the intent. Python code is written to identify the sub intent.

Dataset consists of queries, intents and responses. As the initial step, the queries in the form of sentence is broken down to words using `split()` in python. A query may include words such as a, an, the etc which do not contribute for the classification. These words are called as stopwords. All the stopwords are removed. Then the words are converted to vectors using bag of words model. Similarly intents were also converted into numbers ranging from 0 to 5. Now the excel file contains all the queries converted to numbers and the intent is placed in the last column. This is modelled as multi classification task in machine learning that has four class labels starting from 0 to 3. Decision tree algorithm and neural network has been used to create a classification model. Tkinter library in python is used to create the graphical user interface. The chatbot has been tested. It answers the questions properly.