Summer Project 2021
(May - July)

Chatbot Generator for Visitors at a University and proving their effectiveness

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Interests: Machine Learning, Deep Learning, Data Visualization, Front End Development

Background:

- Decision-support for the Masses by Enabling Conversations with Open Data
- Configuration on user's preferences
- Usage of AI/NLP tools for automating chatbot generation
- A/B testing on chatbots via randomized controlled trial

Problem:

The incoming students have standard questions that usually cover the same set of topics. Answering questions takes much time for the support staff and the answers may be delayed for many days.

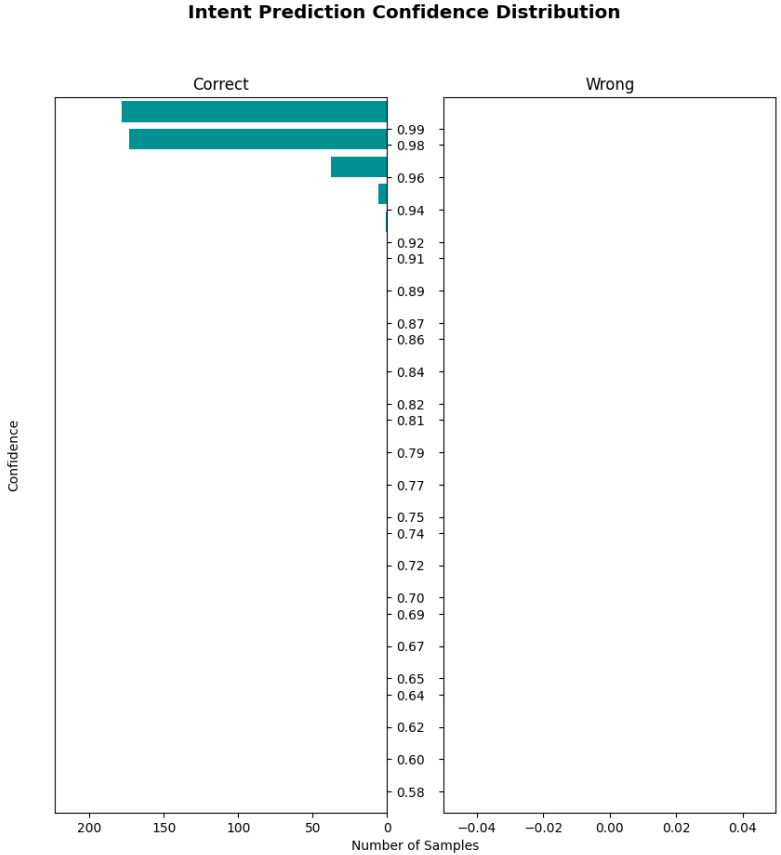
Approach & Solution:

- **Design:** A chatbot generator that will generate a chatbot for a university
- **Reponses Dataset:** Predefined set of responses in English for testing and training
- **Training:** Neural Network for predicting the best response from the dataset for the user's utterance
- **Testing:** Its effectiveness with students using it and without it, also the aim is to measure the effectiveness of chatbot with respect to real people
- **Validation:** The chatbot based AI will be validated by conducting a randomized controlled trial, which includes analyzing the records of chatbot dialogue

Code available at: https://github.com/rhazra-003/Chatbot_USC

Evaluation:

- Created dataset of Q&A for 3 Unis (UoSC, IIT-R, NIT-D)
- Explored Rasa framework
- Achieved the creation of chatbot with **f1 score of 0.9983** with about **50 intents**
- Recording of the conversation for user preference analysis
- Problem with deployment for technical issues in Rasa
- Work in progress for design of randomised controlled trial



Works to be done:

- Trying out the autogenerativenss (for 2 or 3 university variants)
- Creating and carrying out the whole testing procedure starting from UoSC
- Analysis of the conversations with users
- Taking the system to production level
- Publishing paper in AI/NLP related conference

Thank You!!