

Group Members (sorted alphabetically by last name): Nicole Sandra-Yaffa Dumont, Sakif Hos-sain Khan, Kira Aveline Selby, Congcong Zhi

Title: Constructing Textual Artificial Conversational Entities using Deep Learning

Description: An artificial conversational entity or “chatbot” is an automated system which aims to produce meaningful and useful answers to queries from human users. While both queries and responses may be either auditory or textual, we aim to build a chatbot which takes queries in English text and responds in kind. Towards this goal, we shall employ natural language processing techniques from the deep learning literature. More precisely, we hope to use language models such as word2vec and seq2seq to produce low-dimensional word embeddings to capture textual semantics and we plan to deploy contemporary recurrent neural network architectures to both produce such embeddings and construct meaningful syntactical responses. The models will initially be trained on part or all of a standard benchmark dataset. However, time and computational resources permitting, we may train on bigger or more novel datasets and we will attempt to implement more sophisticated natural language tasks such as reading comprehension, question answering or sentiment analysis.