

Goal: Design and implement a chatbot based on deep neural networks, conduct experiments, and analyze results.

Bachelor's Thesis: Chatbot Based on Deep Neural Networks

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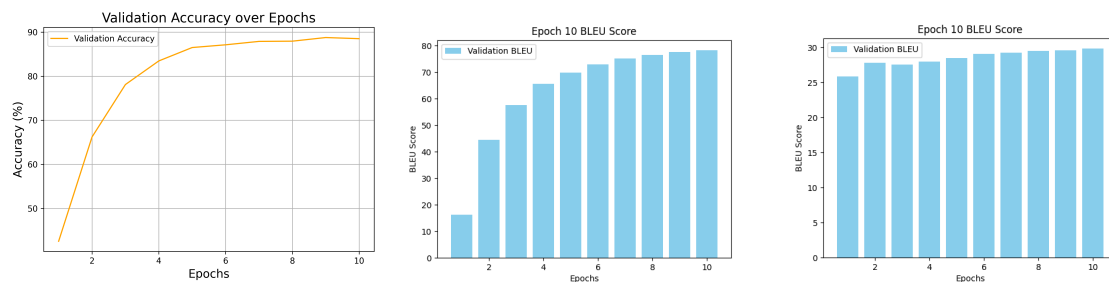
Bachelor's Thesis Presentation Poster

Achieved: Two chatbots were implemented on different architectures. Chatbots are capable of meaningful dialogue. Evaluated using both quantitative metrics and user feedback.

Example of chatting:

- You: Hi!
- Bot: Hello.
- You: How are you?
- Bot: Great, thanks.
- You: Do you have a name?
- Bot: I don't have a name.
- You: What jokes do you know?
- Bot: I'm not really that funny.
- You: I want you to ask me a question
- Bot: I'm better at answering questions.
- You: How old are you?
- Bot: Age doesn't really apply to me.
- You: Boring
- Bot: I aim for efficiency.
- You: Hello Google)))
- Bot: That's not me, but hello.
- You: Bye bye and some text that you never saw))
- Bot: Goodbye.
- You: Are you here?
- Bot: Okay, but I'm still here if you need me.

Metrics: Simple Dataset: First chatbot - 88% accuracy, Second chatbot - 80% BLEU. Complex Dataset (up to 100 tokens): Second chatbot - 22% and 30% BLEU for standard and reduced models, respectively.



User Feedback: Simple Dataset (First chatbot): Average relevance, good clarity, slightly below average usefulness, average naturalness. Simple Dataset (Second chatbot): Slightly higher ratings (1-2 points) due to more varied and contextually appropriate responses. Complex Dataset (Second chatbot, up to 100 tokens): Mixed feedback with good individual responses but context inconsistency due to dataset noise.

