

Model Development Phase Template

Date	15 March 2024
Team ID	739890
Project Title	Bookmate: A Chatbot Companion For Book Recommendations
Maximum Marks	5 Marks

Model Selection Report

In the model selection report for future deep learning and computer vision projects, various architectures, such as CNNs or RNNs, will be evaluated. Factors such as performance, complexity, and computational requirements will be considered to determine the most suitable model for the task at hand.

Model Selection Report:

Model	Description
Rasa NLU Model	<p>Rasa NLU is a robust natural language understanding (NLU) framework designed to power intelligent chatbots and virtual assistants. It excels at accurately recognizing user intents and extracting relevant entities from textual inputs. By leveraging advanced machine learning techniques, Rasa NLU enables the creation of sophisticated conversational AI systems that can understand and respond to user queries in a natural and intuitive manner. With its customizable pipelines and easy integration with Rasa Core, Rasa NLU empowers developers to build highly effective and personalized chatbot experiences.</p> <p>Training and Evaluating the NLU Model:</p> <ol style="list-style-type: none"> Prepare Training Data: Create a JSON file with annotated training examples.

	<ol style="list-style-type: none"> Train the Model: Use Rasa's training command to train the model. Evaluate the Model: Evaluate the model's performance using metrics like accuracy, precision, recall, and F1-score.
<p>Deep Learning Model (e.g., RNN, Transformer)</p>	<p>Deep learning models have revolutionized the field of recommendation systems, and book recommendations are no exception. These models, particularly Recurrent Neural Networks (RNNs) and Transformers, have shown significant promise in capturing complex patterns in user behavior and book characteristics.</p> <p>Recurrent Neural Networks (RNNs) for Sequential Recommendations</p> <p>RNNs are well-suited for sequential data, making them ideal for capturing reading history and user preferences. By processing user interactions in chronological order, RNNs can learn temporal dependencies and predict future preferences.</p>