

INTISARI

PERBANDINGAN AKURASI METODE *GATED RECURRENT UNIT*, *BIDIRECTIONAL GATED RECURRENT UNIT*, *CONVOLUTIONAL GATED RECURRENT UNIT* DAN *MEMORY NETWORK* DALAM PENYELESAIAN PERMASALAHAN MESIN TANYA JAWAB BERBASIS PENALARAN

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Di era ini, mesin telah banyak berkomunikasi dengan kita manusia. Penggunaan chat bot untuk keperluan industri kini pun semakin marak. Perusahaan-perusahaan memanfaatkan *chat bot* untuk melayani berbagai keperluan pelanggannya. *Chat bot* mampu melakukan percakapan yang cukup baik dengan manusia. Tentu dalam berbagai percakapan ini, mesin haruslah mampu menjawab berbagai pertanyaan dari manusia. Dalam perkembangannya, mesin juga dituntut untuk mampu menjawab permasalahan yang membutuhkan penalaran secara transitif. Tugas untuk menjawab berbagai pertanyaan secara otomatis dengan melibatkan penalaran transitif inilah yang kita sebut dengan permasalahan tanya jawab berbasis penalaran.

Pada Penelitian ini digunakan model *Gated Recurrent Unit*, *Bidirectional Gated Recurrent Unit*, *Convolutional Gated Recurrent Unit* dan *Memory Network* untuk menyelesaikan permasalahan tanya jawab berbasis penalaran yang berasal dari dataset Facebook babi.

Hasil penelitian menunjukkan bahwa rata-rata akurasi model *Gated Recurrent Unit* adalah 85.8%, *Bidirectional Gated Recurrent Unit* adalah 86.6%, model *Convolutional Gated Recurrent Unit* adalah 71.7% dan model *Memory Network* adalah 76.3%.

Kata kunci : GRU, *Bidirectional GRU*, *Convolutional GRU*, *Memory Network*,



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PENALARAN**

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Permasalahan tanya jawab berbasis penalaran

ABSTRACT

COMPARISON OF THE ACCURACY OF *GATED RECURRENT UNIT*, *BIDIRECTIONAL GATED RECURRENT UNIT*, *CONVOLUTIONAL GATED RECURRENT UNIT* AND *MEMORY NETWORK* METHOD FOR SOLVING REASON BASED QUESTION-ANSWERING MACHINE PROBLEM

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In this era, machines have communicated with humans. The use of chat bots for the industrial need is increasing now. Companies use chat bots to serve the various needs of their customers. Chat bots are able to have a pretty good conversation with humans. Of course in these various conversations, the machine must be able to answer questions from people. The machine is also required to be able to answer questions that require *transitive* transparent. The task of answering these questions that needs to do *transitive* reasoning automatically is what we call the Reasoning Based Question Answering Problem.

In this research we use *Gated Recurrent Unit* model, *Bidirectional Gated Recurrent Unit*, *Convolutional Gated Recurrent Unit* and *Memory Network* to solve the reason based question answering machine problem that comes from facebook BaBi datasets.

The results show that the average accuracy of *Gated Recurrent Unit* model is 85.8%, *Bidirectional Gated Recurrent Unit* is 86.6%, *Convolutional Gated Recurrent Unit* model is 71.7% and *Memory Network* model is 76.3%.

Keyword : GRU, *Bidirectional* GRU, *Convolutional* GRU, *Memory Network*, Reason-based question answering problems