

## OUR RESULTS

# THE NLP CHATBOT EXAM PROJECT

## CHATBOT EXAMPLES

Rank	Model	EM	F1	Paper	Code	Result	Year	Tags	🗖
1	IE-Net (ensemble)	90.939	93.214				2021		
2	FPNet (ensemble)	90.871	93.183				2021		
3	IE-NetV2 (ensemble)	90.860	93.100				2021		
4	SA-Net on Albert (ensemble)	90.724	93.011				2020		
5	Retro-Reader (ensemble)	90.578	92.978	Retrospective Reader for Machine Reading Comprehension	<a href="#">🔗</a>	<a href="#">📄</a>	2020	<a href="#">Transformer</a>	

Rank	Model	EM	F1	Paper	Code	Result	Year	Tags	🗖
137	BERT (SQuAD)	79.243	87.572				2022	DL-DTU	
234	BERT-base	72.072	75.513				2020		
235	BERTBase (single model)	72.072	75.513				2020		

07-12-2022 20:38:53

You: who are you?

07-12-2022 20:37:00  
Bot: I am IMMABOT, an Intelligent Multi-Model Artificial BOT, and I am here to provide you with the information I can retrieve about Amazon products.

07-12-2022 21:06:43

You: Hello

07-12-2022 21:05:47  
Bot: Hello, how may I be of assistance?

07-12-2022 21:11:43

You: Hello

07-12-2022 21:11:44  
Bot: Thank you for stopping by!

07-12-2022 21:11:53

You: Hello

07-12-2022 21:11:53  
Bot: Hello, what can I do for you?

07-12-2022 21:24:27

You: What's your cheapest product?

07-12-2022 21:24:31  
Bot: If the item described as "Project Hall Mary" is not what you are looking for, please reformulate your question.

07-12-2022 21:22:41

You: It is! How much for it?

07-12-2022 21:22:44  
Bot: The cost of the item is \$0.00.

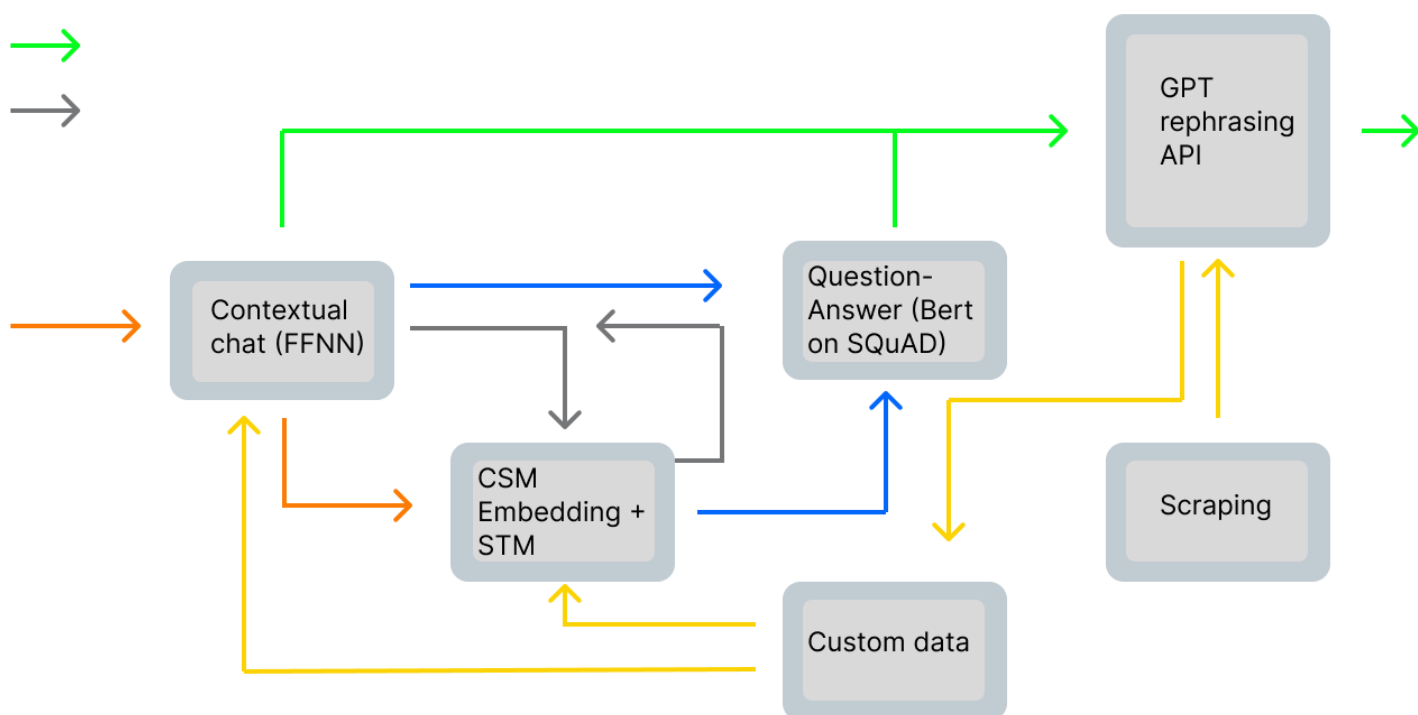
07-12-2022 21:23:03

You: Are you telling me, that I'm getting it for free?

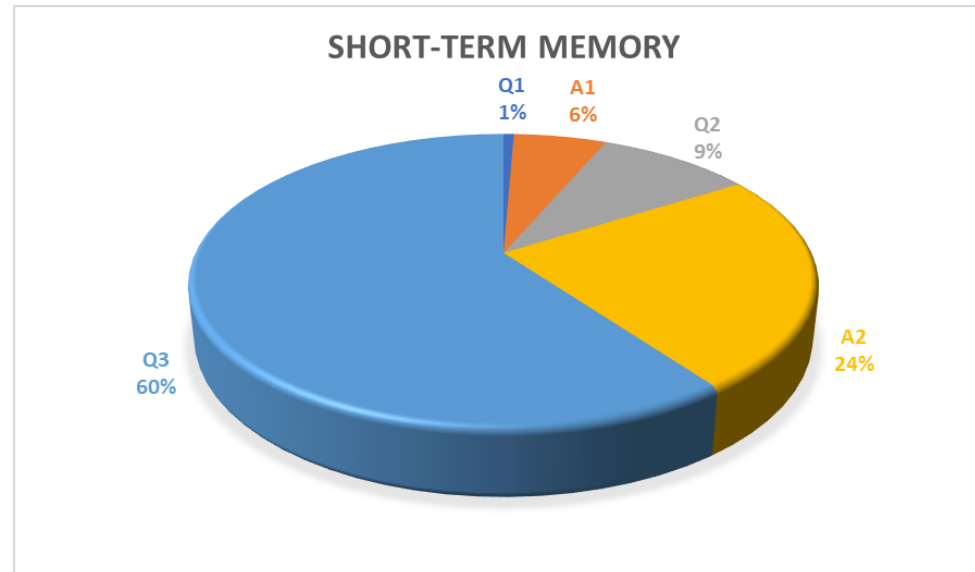
07-12-2022 21:23:07  
Bot: You are eligible for a 100% discount, however, if this is not what you are searching for, please reformulate your query.

## OUR MULTI-MODEL CHATBOT

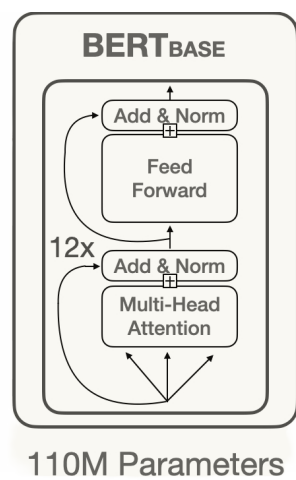
Data: →  
Question: →  
Context: →  
Answer: →  
STM: →



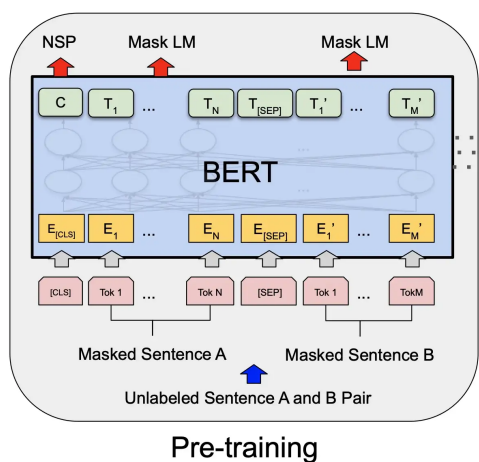
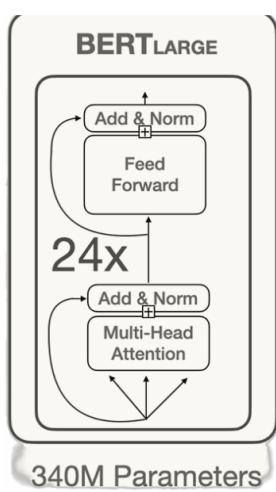
FEED FORWARD NN,  
GENERAL SEARCH,  
SENTENCE EMBEDDING,  
SHORT TERM EMBEDDING,  
COSINE SIMILARITY



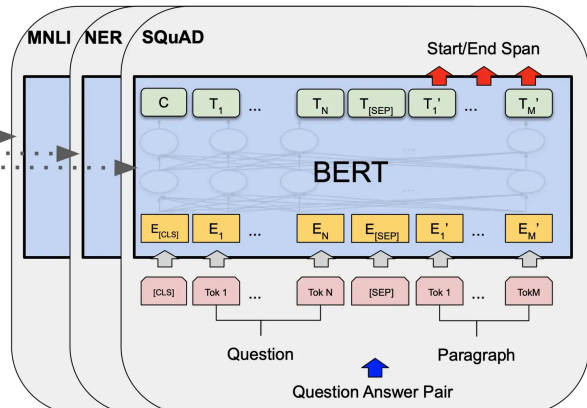
## IMPORTANT MODELS



IMPORTANT ASPECTS OF BERT  
BERT PRE-TRAINING AND FINE  
TUNING,  
NSP & MLM ,  
UNSUPERVISED,  
EMBEDDINGS,  
SQUAD DATASAT,  
SQUAD FINE-TUNING



Pre-training



Fine-Tuning

“ATTENTION IS ALL  
U NEED”

TRANSFORMER  
MODEL,  
ATTENTION,  
INPUT  
EMBEDDING,  
POSITIONAL  
ENCODING  
(SIN&COS),  
FEED  
FORWARD

