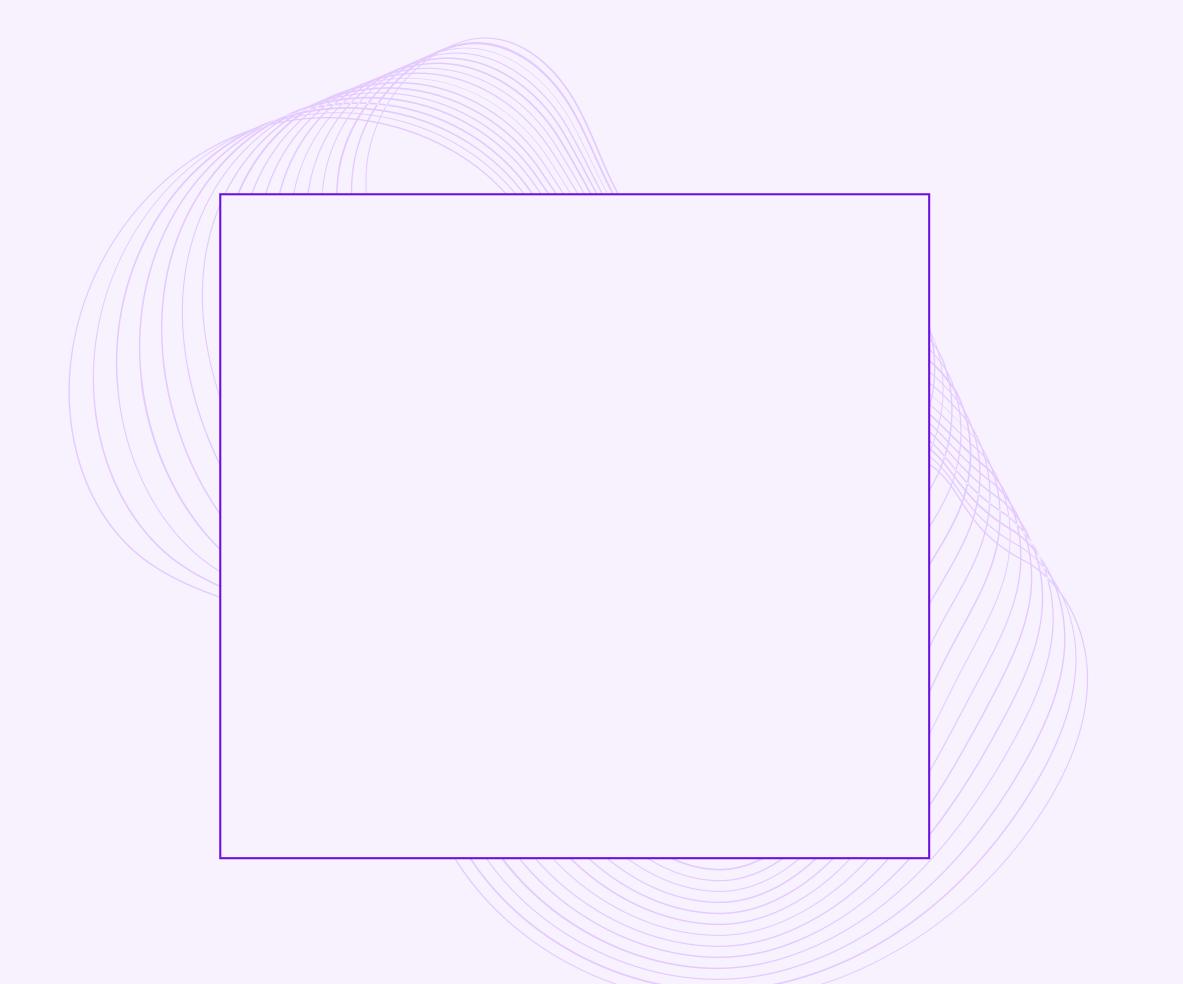01

QUESTION ANSWER IN HINDI & TAMIL

Divya Kartik

INTRODUCTION

- Our Project was transformers to create a model that can answer a given question in Tamil or Hindi given a piece of context text
- We have tested multiple different models ranging from mT5 to our final XLM-RoBERTa.
- These models were taken from Transformers Pre-defined Models, and one model we created on our own
- We used these models as a base and then tuned hyperparameters, and applied regularization techniques to the initial data

NETWORK ARCHITECTURE

03

Base Model: XLM-RoBERTa

doc_stride = 340

max_length = 256

batch_size = 32

num_folds = 5

num_epochs = 2

learning_rate=3e-5,

warmup_ratio=0.1,

gradient_accumulation_steps=10,

MODEL TESTING

we tested the performance of a number of different models and decided that **XLM-RoBERTa Large Squad 2** was the best one

HYPERPARAMETERS

OPTIMISER

optimizer = Adam(lr=0.0001)

LEARNING RATE

lr = 3e-5

EPOCHS

epochs: 5
batch_size: 32

DATA TRANSFORMATION

we added an answer end column to the given data so that the model would more easily be able to pick out the exact answer

MODEL PERFORMANCE

	question
	ज्वाला गुट्टा की माँ का नाम क्या है
	गूगल मैप्स कब लॉन्च किया गया था?
	गुस्ताव किरचॉफ का जन्म कब हुआ था?
	அலுமினியத்தின் அணு எண் என்ன?
	இந்தியாவில் பசுமை புரட்சியின் தந்தை என்று கருத...

	id	PredictionString
0	22bff3dec	येलन चीन से हैं। उनकी मां येलन गुट्टा
1	282758170	28 नवम्बर 2007
2	d60987e0e	१२ मार्च १८२४
3	f99c770dc	13
4	40dec1964	சுவாமிநாதன்

QUESTIONS

ANSWERS

SIGNIFICANCE

- Ideally, this would be used in a context where a user could enter a question and the program would look through a database of texts and find the answer to the question and return it to the user
- This links to the theme this year of "Around the World" since we have looked at languages that question and answer NLP has not yet been explored in depth yet and so is still quite lacking