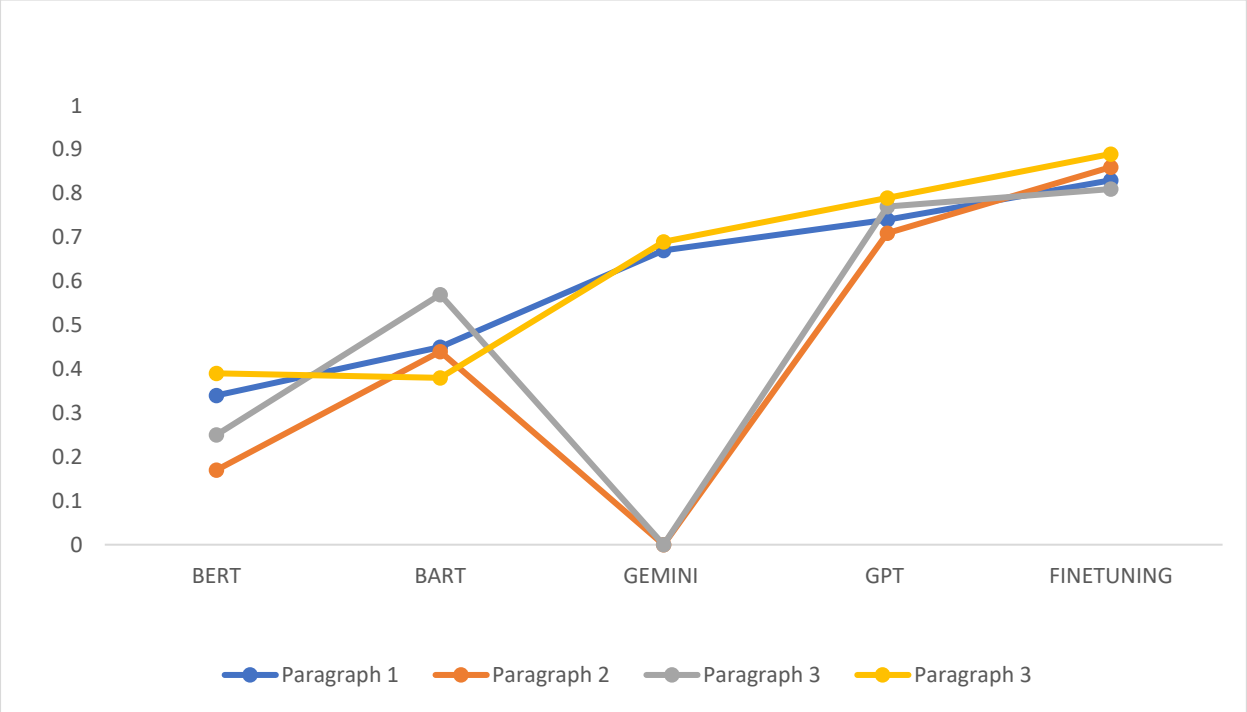
Multiclass Text Classification with Fine Tuning (F1- Score)

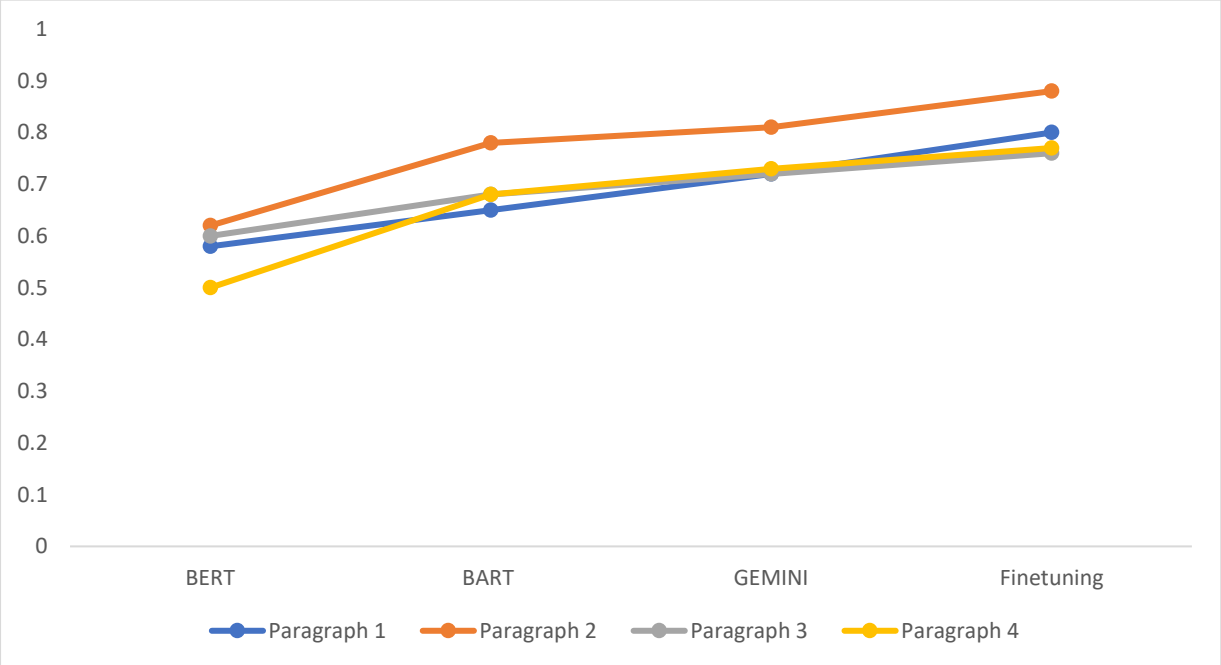
PARAGRAPHS	BERT	BART	GEMINI	GPT	FINE TUNING (PIPELINE)
P1	0.34	0.45	0.67	0.74	0.83
P2	0.17	0.44	NA	0.71	0.86
P3	0.25	0.57	NA	0.77	0.81
P4	0.39	0.38	0.69	0.79	0.89



The fine-tuning model demonstrates superior performance compared to existing NLP models such as BERT, BART, GEMINI, and GPT, achieving an average F1-Score of 0.85. Within the existing models, certain ones exhibit notably lower accuracy, while others fail to produce results altogether.

Relation Extraction and Summarization using Fine-tuning (F1-Score)

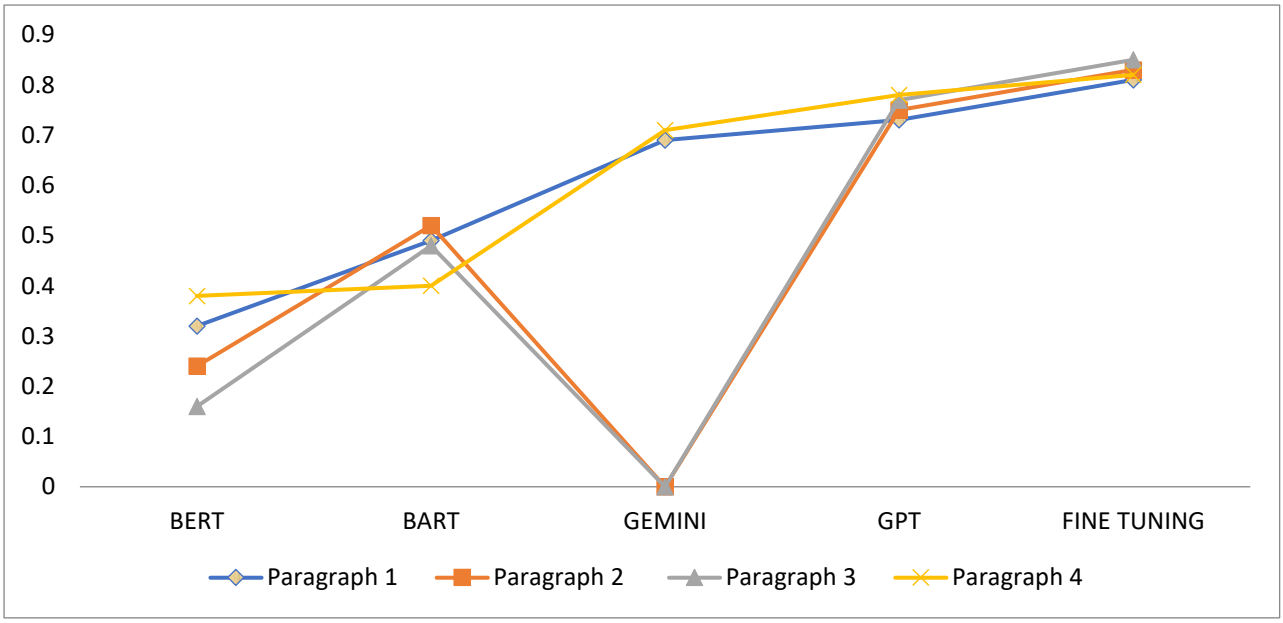
Paragraph	BERT	BART	Gemini	Finetuning
P1	0.58	0.65	0.72	0.80
P2	0.62	0.78	0.81	0.88
P3	0.60	0.68	0.72	0.76
P4	0.50	0.68	0.73	0.77



The fine-tuning model demonstrates superior performance compared to existing NLP models such as BERT, BART, GEMINI, and GPT, achieving an average F1-Score of 0.85. Within the existing models, certain ones exhibit notably lower accuracy, while others fail to produce results altogether.

Multi-Label text classification using Fine-tuning (F1-Score)

Paragraphs	BERT	BART	GEMINI	GPT	FINE-TUNING
P1	0.32	0.49	0.69	0.73	0.81
P2	0.24	0.52	NA	0.75	0.83
P3	0.16	0.48	NA	0.77	0.85
P4	0.38	0.40	0.71	0.78	0.82



The fine-tuning model demonstrates superior performance compared to existing NLP models such as BERT, BART, GEMINI, and GPT, achieving an average F1-Score of 0.87. Within the existing models, certain ones exhibit notably lower accuracy, while others fail to produce results altogether.