

BERT 50 Samples 16 Hidden Dim:

Best Model Performance :
Weighted F1-Score:0.4378483245149912
Company's image F1-Score:0.42857142857142855
Customer service F1-Score:0.28571428571428575
Operational issues F1-Score:0.3703703703703703
Product feature or quality F1-Score:0.5555555555555556
Service quality or failure F1-Score:0.5499999999999999

BERT 100 Samples 16 Hidden Dim:

Best Model Performance :
Weighted F1-Score:0.5395079118603964
Company's image F1-Score:0.6122448979591838
Customer service F1-Score:0.45
Operational issues F1-Score:0.34782608695652173
Product feature or quality F1-Score:0.6938775510204082
Service quality or failure F1-Score:0.5714285714285714

BERT 200 Samples 16 Hidden Dim:

Best Model Performance :
Weighted F1-Score:0.5247170137789426
Company's image F1-Score:0.5531914893617021
Customer service F1-Score:0.380952380952381
Operational issues F1-Score:0.4536082474226804
Product feature or quality F1-Score:0.7207207207207208
Service quality or failure F1-Score:0.3492063492063492

BERT 100 Samples 32 Hidden Dim:

Best Model Performance :

Weighted F1-Score:0.5145415307609013

Company's image F1-Score:0.5641025641025641

Customer service F1-Score:0.46511627906976744

Operational issues F1-Score:0.3333333333333333

Product feature or quality F1-Score:0.6808510638297872

Service quality or failure F1-Score:0.5217391304347826

BERT 100 Samples 64 Hidden Dim:

Best Model Performance :

Weighted F1-Score:0.4499384084749938

Company's image F1-Score:0.5555555555555555

Customer service F1-Score:0.4390243902439024

Operational issues F1-Score:0.16666666666666663

Product feature or quality F1-Score:0.5818181818181818

Service quality or failure F1-Score:0.4444444444444445

BERT 100 Samples 8 Hidden Dim:

Best Model Performance :

Weighted F1-Score:0.4996189177206789

Company's image F1-Score:0.4489795918367347

Customer service F1-Score:0.5333333333333333

Operational issues F1-Score:0.18181818181818185

Product feature or quality F1-Score:0.6909090909090908

Service quality or failure F1-Score:0.5205479452054794

RoBERTa 100 Samples 16 Hidden Dim:

Best Model Performance :

Weighted F1-Score:0.6056753815783138

Company's image F1-Score:0.6666666666666667

Customer service F1-Score:0.5581395348837209

Operational issues F1-Score:0.391304347826087

Product feature or quality F1-Score:0.7142857142857142

Service quality or failure F1-Score:0.64

RoBERTa 100 Samples 16 Hidden Dim Data Augmentation Deletion:

Best Model Performance :

Weighted F1-Score:0.5956007485137645

Company's image F1-Score:0.7107438016528926

Customer service F1-Score:0.5882352941176471

Operational issues F1-Score:0.537142857142857

Product feature or quality F1-Score:0.5858585858585859

Service quality or failure F1-Score:0.5631067961165049

RoBERTa 100 Samples 16 Hidden Dim Data Augmentation Swapping:

Best Model Performance :

Weighted F1-Score:0.7684619431591224

Company's image F1-Score:0.796875

Customer service F1-Score:0.7787610619469026

Operational issues F1-Score:0.6923076923076924

Product feature or quality F1-Score:0.8288288288288289

Service quality or failure F1-Score:0.7627118644067796

RoBERTa 100 Samples 16 Hidden Dim Data Augmentation Synonym Substitution:

Best Model Performance :

Weighted F1-Score:0.7351709204813417
Company's image F1-Score:0.7933884297520661
Customer service F1-Score:0.7142857142857142
Operational issues F1-Score:0.6818181818181818
Product feature or quality F1-Score:0.8455284552845529
Service quality or failure F1-Score:0.6428571428571428

RoBERTa 100 Samples 16 Hidden Dim Data Augmentation Distill-BERT Contextual Embed Substitution:

Best Model Performance :

Weighted F1-Score:0.6760570480124936
Company's image F1-Score:0.7435897435897435
Customer service F1-Score:0.6875
Operational issues F1-Score:0.6138613861386139
Product feature or quality F1-Score:0.7132867132867133
Service quality or failure F1-Score:0.5961538461538461

RoBERTa 100 Samples 16 Hidden Dim Data Augmentation Fasttext word-Emb Substitute:

Best Model Performance :

Weighted F1-Score:0.6459196102847444

Company's image F1-Score:0.7184466019417477

Customer service F1-Score:0.702127659574468

Operational issues F1-Score:0.42187499999999994

Product feature or quality F1-Score:0.7428571428571428

Service quality or failure F1-Score:0.637037037037037