Epoch 1/15

1682/1682 [==============================] - 1141s 676ms/step - loss: 2.9446 - accuracy: 0.6526 - val\_loss: 0.4694 - val\_accuracy: 0.7094 - lr: 1.0000e-04

Epoch 2/15

1682/1682 [==============================] - 1120s 666ms/step - loss: 0.4169 - accuracy: 0.7527 - val\_loss: 0.4674 - val\_accuracy: 0.7057 - lr: 1.0000e-04

Epoch 3/15

1682/1682 [==============================] - 1091s 648ms/step - loss: 0.3165 - accuracy: 0.8461 - val\_loss: 0.6265 - val\_accuracy: 0.6777 - lr: 1.0000e-04

Epoch 4/15

1682/1682 [==============================] - 1121s 666ms/step - loss: 0.1028 - accuracy: 0.9667 - val\_loss: 1.1301 - val\_accuracy: 0.6669 - lr: 1.0000e-04

Epoch 5/15

1682/1682 [==============================] - 1104s 657ms/step - loss: 0.0189 - accuracy: 0.9976 - val\_loss: 1.7301 - val\_accuracy: 0.6703 - lr: 7.0000e-05

2883/2883 [==============================] - 33s 11ms/step

Evaluation Metrics:

Precision: 0.6766

Recall: 0.7791

F1 Score: 0.7243

ROC AUC: 0.8225

PR AUC: 0.8442

MCC: 0.4115

y\_pred = (test\_scores > 0.6).astype(int)

...: y\_true = y\_test.astype(int)

...:

...: # Calculate evaluation metrics

...: precision = precision\_score(y\_true, y\_pred)

...: recall = recall\_score(y\_true, y\_pred)

...: f1 = f1\_score(y\_true, y\_pred)

...: roc\_auc = roc\_auc\_score(y\_true, test\_scores)

...: pr\_auc = average\_precision\_score(y\_true, test\_scores)

...: mcc = matthews\_corrcoef(y\_true, y\_pred)

...:

...: # Display evaluation metrics

...: print("\nEvaluation Metrics:")

...: print(f'Precision: {precision:.4f}')

...: print(f'Recall: {recall:.4f}')

...: print(f'F1 Score: {f1:.4f}')

...: print(f'ROC AUC: {roc\_auc:.4f}')

...: print(f'PR AUC: {pr\_auc:.4f}')

...: print(f'MCC: {mcc:.4f}')

...: y\_pred = (test\_scores > 0.7).astype(int)

...: y\_true = y\_test.astype(int)

...:

...: # Calculate evaluation metrics

...: precision = precision\_score(y\_true, y\_pred)

...: recall = recall\_score(y\_true, y\_pred)

...: f1 = f1\_score(y\_true, y\_pred)

...: roc\_auc = roc\_auc\_score(y\_true, test\_scores)

...: pr\_auc = average\_precision\_score(y\_true, test\_scores)

...: mcc = matthews\_corrcoef(y\_true, y\_pred)

...:

...: # Display evaluation metrics

...: print("\nEvaluation Metrics:")

...: print(f'Precision: {precision:.4f}')

...: print(f'Recall: {recall:.4f}')

...: print(f'F1 Score: {f1:.4f}')

...: print(f'ROC AUC: {roc\_auc:.4f}')

...: print(f'PR AUC: {pr\_auc:.4f}')

...: print(f'MCC: {mcc:.4f}')

...:

Evaluation Metrics:

Precision: 0.8948

Recall: 0.4866

F1 Score: 0.6304

ROC AUC: 0.8225

PR AUC: 0.8442

MCC: 0.4825

Evaluation Metrics:

Precision: 0.9244

Recall: 0.4737

F1 Score: 0.6264

ROC AUC: 0.8225

PR AUC: 0.8442

MCC: 0.4982

Εικόνα που περιέχει κείμενο, γραμμή, διάγραμμα, γράφημα

Περιγραφή που δημιουργήθηκε αυτόματα

Εικόνα που περιέχει κείμενο, διάγραμμα, γράφημα, γραμμή

Περιγραφή που δημιουργήθηκε αυτόματα

Εικόνα που περιέχει κείμενο, στιγμιότυπο οθόνης, διάγραμμα, σχεδίαση

Περιγραφή που δημιουργήθηκε αυτόματα

Εικόνα που περιέχει κείμενο, διάγραμμα, γραμμή, γράφημα

Περιγραφή που δημιουργήθηκε αυτόματα

Εικόνα που περιέχει στιγμιότυπο οθόνης, κείμενο, οθόνη, γραμμή

Περιγραφή που δημιουργήθηκε αυτόματα

Εικόνα που περιέχει κείμενο, στιγμιότυπο οθόνης, γραμμή, διάγραμμα

Περιγραφή που δημιουργήθηκε αυτόματα

Εικόνα που περιέχει κείμενο, στιγμιότυπο οθόνης, οθόνη

Περιγραφή που δημιουργήθηκε αυτόματα

Triplet 1 (Original):

Subject: https://ec.europa.eu/eurostat/NLP4StatRef/ontology/ei\_qna, Predicate: http://www.w3.org/1999/02/22-rdf-syntax-ns#type, Object: https://ec.europa.eu/eurostat/NLP4StatRef/ontology/StatisticalData

157/157 [==============================] - 6s 40ms/step

Intercept 0.5866139087429558

Prediction\_local [0.23066693]

Right: 0.501053

Feature Importances (Coefficients):

Predicate: -0.17924696668375778

Object: -0.15871736113621587

Subject: -0.017982655788109918

Triplet 2 (Original):

Subject: https://ec.europa.eu/eurostat/NLP4StatRef/knowledge/hlth\_ehis\_aw1u, Predicate: https://ec.europa.eu/eurostat/NLP4StatRef/ontology/term, Object: hlth\_ehis\_aw1u

157/157 [==============================] - 2s 13ms/step

Intercept 0.36591853240185096

Prediction\_local [0.56239226]

Right: 0.51977354

Feature Importances (Coefficients):

Predicate: 0.13166211794258761

Subject: 0.03734240668492426

Object: 0.027469199130204167

Triplet 3 (Original):

Subject: https://ec.europa.eu/eurostat/NLP4StatRef/knowledge/paragraph9574\_3455, Predicate: http://www.w3.org/1999/02/22-rdf-syntax-ns#type, Object: https://ec.europa.eu/eurostat/NLP4StatRef/ontology/Paragraph

157/157 [==============================] - 2s 13ms/step

Intercept 0.5838833657285694

Prediction\_local [0.2321572]

Right: 0.50384057

Feature Importances (Coefficients):

Predicate: -0.17708045655168067

Object: -0.15980848006260728

Subject: -0.014837228981540494

Triplet 4 (Original):

Subject: https://ec.europa.eu/eurostat/NLP4StatRef/ontology/fats\_08, Predicate: https://ec.europa.eu/eurostat/NLP4StatRef/ontology/level, Object: 4

157/157 [==============================] - 2s 12ms/step

Intercept 0.5061312408110459

Prediction\_local [0.33695851]

Right: 0.3291307

Feature Importances (Coefficients):

Predicate: -0.16282226603604893

Subject: -0.026293052255674954

Object: 0.019942586046488107

Triplet 5 (Original):

Subject: https://ec.europa.eu/eurostat/NLP4StatRef/knowledge/glossaryArticle118, Predicate: https://ec.europa.eu/eurostat/NLP4StatRef/ontology/hasReference, Object: https://ec.europa.eu/eurostat/NLP4StatRef/knowledge/referenceSource59

157/157 [==============================] - 2s 13ms/step

Intercept 0.35277816785543054

Prediction\_local [0.62247897]

Right: 0.52327305

Feature Importances (Coefficients):

Object: 0.16658375699598166

Predicate: 0.09998976023404349

Subject: 0.0031272880104183266