Epoch 1/15

3363/3363 [==============================] - 20564s 6s/step - loss: 319.9887 - accuracy: 0.6386 - val\_loss: 72.9459 - val\_accuracy: 0.5574 - lr: 5.0000e-05

Epoch 2/15

3363/3363 [==============================] - 20700s 6s/step - loss: 56.7794 - accuracy: 0.5752 - val\_loss: 48.8570 - val\_accuracy: 0.5037 - lr: 5.0000e-05

Epoch 3/15

3363/3363 [==============================] - 19851s 6s/step - loss: 40.4862 - accuracy: 0.5498 - val\_loss: 61.9289 - val\_accuracy: 0.5000 - lr: 5.0000e-05

Epoch 4/15

3363/3363 [==============================] - 20711s 6s/step - loss: 34.2318 - accuracy: 0.5596 - val\_loss: 62.7687 - val\_accuracy: 0.5007 - lr: 5.0000e-05

Epoch 5/15

3363/3363 [==============================] - 21198s 6s/step - loss: 27.1408 - accuracy: 0.5884 - val\_loss: 58.2190 - val\_accuracy: 0.5006 - lr: 2.5000e-05

2883/2883 [==============================] - 874s 303ms/step

Evaluation Metrics:

Precision: 0.5017

Recall: 1.0000

F1 Score: 0.6682

ROC AUC: 0.7031

PR AUC: 0.6850

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)

...:

...: # 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}')

...: 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)

...:

...: # 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}')

...:

Evaluation Metrics:

Precision: 0.5022

Recall: 1.0000

F1 Score: 0.6686

ROC AUC: 0.7031

PR AUC: 0.6850

Evaluation Metrics:

Precision: 0.5028

Recall: 1.0000

F1 Score: 0.6691

ROC AUC: 0.7031

PR AUC: 0.6850

Εικόνα που περιέχει κείμενο, στιγμιότυπο οθόνης, διάγραμμα, γράφημα

Περιγραφή που δημιουργήθηκε αυτόματα

Εικόνα που περιέχει κείμενο, στιγμιότυπο οθόνης, διάγραμμα, ορθογώνιο παραλληλόγραμμο

Περιγραφή που δημιουργήθηκε αυτόματα

Εικόνα που περιέχει κείμενο, στιγμιότυπο οθόνης, διάγραμμα, πολυχρωμία

Περιγραφή που δημιουργήθηκε αυτόματα

Εικόνα που περιέχει κείμενο, στιγμιότυπο οθόνης, διάγραμμα, πολυχρωμία

Περιγραφή που δημιουργήθηκε αυτόματα

Εικόνα που περιέχει διάγραμμα, γράφημα, κείμενο, γραμμή

Περιγραφή που δημιουργήθηκε αυτόματα

Εικόνα που περιέχει κείμενο, στιγμιότυπο οθόνης, διάγραμμα, λογισμικό

Περιγραφή που δημιουργήθηκε αυτόματα

Εικόνα που περιέχει κείμενο, γραμμή, γράφημα, διάγραμμα

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 [==============================] - 46s 294ms/step

Intercept 0.9935388003177469

Prediction\_local [0.99382754]

Right: 0.9988509

Feature Importances (Coefficients):

Predicate: 0.0013736093994203458

Subject: -0.00057735697614964

Object: -0.0005075171575973087

Triplet 2 (Original):

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

157/157 [==============================] - 49s 314ms/step

Intercept 0.9926803759338306

Prediction\_local [0.99542306]

Right: 0.9959563

Feature Importances (Coefficients):

Object: 0.002054844929031644

Predicate: 0.0012175061190455394

Subject: -0.0005296639530719135

Triplet 3 (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 [==============================] - 49s 309ms/step

Intercept 0.9944563588495889

Prediction\_local [0.99205102]

Right: 0.99210227

Feature Importances (Coefficients):

Predicate: -0.0014909565611766764

Object: -0.0011559821282560994

Subject: 0.00024160012602250855

Triplet 4 (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 [==============================] - 49s 313ms/step

Intercept 0.9935267653049663

Prediction\_local [0.99335762]

Right: 0.99438655

Feature Importances (Coefficients):

Object: -0.001385455801841434

Predicate: 0.0012790952932527303

Subject: -6.27886599159113e-05

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 [==============================] - 49s 309ms/step

Intercept 0.9931923018194806

Prediction\_local [0.99524115]

Right: 0.99207187

Feature Importances (Coefficients):

Object: 0.0020742866440563727

Predicate: -0.0005668406101071861

Subject: 0.0005414005589733583