Epoch 1/15

2024-06-03 19:53:07.333801: W tensorflow/tsl/framework/cpu\_allocator\_impl.cc:83] Allocation of 175155200 exceeds 10% of free system memory.

2024-06-03 19:53:07.528021: W tensorflow/tsl/framework/cpu\_allocator\_impl.cc:83] Allocation of 175155200 exceeds 10% of free system memory.

2024-06-03 19:53:07.579592: W tensorflow/tsl/framework/cpu\_allocator\_impl.cc:83] Allocation of 175155200 exceeds 10% of free system memory.

2024-06-03 19:53:08.390753: W tensorflow/tsl/framework/cpu\_allocator\_impl.cc:83] Allocation of 175155200 exceeds 10% of free system memory.

2024-06-03 19:53:08.414175: W tensorflow/tsl/framework/cpu\_allocator\_impl.cc:83] Allocation of 175155200 exceeds 10% of free system memory.

3363/3363 [==============================] - 3176s 943ms/step - loss: 625.2130 - accuracy: 0.7636 - val\_loss: 318.1098 - val\_accuracy: 0.8272 - lr: 1.0000e-04

Epoch 2/15

3363/3363 [==============================] - 3187s 948ms/step - loss: 192.7299 - accuracy: 0.8234 - val\_loss: 246.2478 - val\_accuracy: 0.8191 - lr: 1.0000e-04

Epoch 3/15

3363/3363 [==============================] - 3179s 945ms/step - loss: 105.4410 - accuracy: 0.8468 - val\_loss: 253.4877 - val\_accuracy: 0.8216 - lr: 1.0000e-04

Epoch 4/15

3363/3363 [==============================] - 3165s 941ms/step - loss: 52.2062 - accuracy: 0.8986 - val\_loss: 304.3635 - val\_accuracy: 0.8444 - lr: 1.0000e-04

Epoch 5/15

3363/3363 [==============================] - 3183s 946ms/step - loss: 19.0625 - accuracy: 0.9665 - val\_loss: 374.1452 - val\_accuracy: 0.8475 - lr: 7.0000e-05

5765/5765 [==============================] - 107s 18ms/step

Evaluation Metrics:

Precision: 0.9970

Recall: 0.2929

F1 Score: 0.4528

ROC AUC: 0.9264

PR AUC: 0.8334

MCC: 0.4839

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

y\_true = y\_test\_augmented.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: 0.9994

Recall: 0.0341

F1 Score: 0.0659

ROC AUC: 0.9264

PR AUC: 0.8334

MCC: 0.1597

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

y\_true = y\_test\_augmented.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: 1.0000

Recall: 0.0031

F1 Score: 0.0062

ROC AUC: 0.9264

PR AUC: 0.8334

MCC: 0.0482

Εικόνα που περιέχει κείμενο, γραμμή, γράφημα, διάγραμμα

Περιγραφή που δημιουργήθηκε αυτόματα

Εικόνα που περιέχει κείμενο, στιγμιότυπο οθόνης, γραμμή, λογισμικό

Περιγραφή που δημιουργήθηκε αυτόματα

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Περιγραφή που δημιουργήθηκε αυτόματα

Εικόνα που περιέχει κείμενο, γράφημα, στιγμιότυπο οθόνης, γραμμή

Περιγραφή που δημιουργήθηκε αυτόματα

Εικόνα που περιέχει κείμενο, στιγμιότυπο οθόνης, γραμματοσειρά, διάγραμμα

Περιγραφή που δημιουργήθηκε αυτόματα

Εικόνα που περιέχει κείμενο, γραμμή, γράφημα, στιγμιότυπο οθόνης

Περιγραφή που δημιουργήθηκε αυτόματα

Triplet 1 (Original):

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

157/157 [==============================] - 8s 21ms/step

Intercept 0.3362663755708357

Prediction\_local [-0.01396528]

Right: 0.041444886

Feature Importances (Coefficients):

Predicate: -0.1398361190396603

Subject: -0.10922343011346285

Object: -0.10117210303010085

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 [==============================] - 3s 19ms/step

Intercept 0.2331323666775261

Prediction\_local [0.29387388]

Right: 0.31018382

Feature Importances (Coefficients):

Object: 0.0370765467067487

Predicate: 0.024481150389934616

Subject: -0.0008161859758147411

Triplet 3 (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 [==============================] - 3s 18ms/step

Intercept 0.2638862767702061

Prediction\_local [0.21930061]

Right: 0.14968072

Feature Importances (Coefficients):

Object: -0.09466616660616924

Predicate: 0.04770129464211923

Subject: 0.002379205896763355

Triplet 4 (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 [==============================] - 3s 18ms/step

Intercept 0.20166327336378098

Prediction\_local [0.42794923]

Right: 0.30166608

Feature Importances (Coefficients):

Object: 0.10459149872861685

Subject: 0.0710168751746278

Predicate: 0.05067757971867183

Triplet 5 (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 [==============================] - 3s 18ms/step

Intercept 0.22096351675663795

Prediction\_local [0.29439996]

Right: 0.288979

Feature Importances (Coefficients):

Predicate: 0.04312242052296539

Subject: 0.03886332845495811

Object: -0.008549308400071008