**Code to create relationships in Neo4j with the dataframe created in python**

**Use word as labels:**

LOAD CSV WITH HEADERS FROM "file:///data.csv" AS data

MERGE (news:news{name:data.NewsName,NewsIndex:data.NewsIndex,Date:data.date,Newspaper:data.newspaper})

MERGE (topic:Topic{name:data.TopicIndex,Model:data.model,TopicName:data.TopicName})

MERGE (words:Words{name:data.WordName,WordType:data.WordType})

MERGE (news)-[:NEWS\_HAS\_WORD]->(words)

MERGE (news)-[:NEWS\_COVERS\_TOPICS{TopicProportion:data.Topicproportion}]->(topic)

MERGE (topic)-[:TOPIC\_CONTAIN\_WORD{WordWeight:data.WordWeight}]->(words)

**Use wordtype as labels:**

LOAD CSV WITH HEADERS FROM "file:///data.csv" AS data

MERGE (news:news{name:data.NewsName,NewsIndex:data.NewsIndex,Date:data.date,Newspaper:data.newspaper})

MERGE (topic:Topic{name:data.TopicIndex,Model:data.model,TopicName:data.TopicName})

MERGE (words:bank:company:government:noun:organization:person:place{name:data.WordName})

MERGE (news)-[:NEWS\_HAS\_WORD]->(words)

MERGE (news)-[:NEWS\_COVERS\_TOPICS{TopicProportion:data.Topicproportion}]->(topic)

MERGE (topic)-[:TOPIC\_CONTAIN\_WORD{WordWeight:data.WordWeight}]->(words)