

Three topics suggested with some details:

Anti-money Laundering (AML) Detection	
Sector	Financial and security
Abstract	Reduce false positive by utilizing detection of money laundering possibility
Keywords	Anomaly detection, credit scoring, credit fraud, know your customer (KYC), human behavior
Problem Solving Method	Supervised learning and/or unsupervised, batch and/or real-time data processing
Inputs	Transactions and KYC data
Possible data sources	https://www.kaggle.com/datasets/mayam1212/money-laundering-data
Others	https://www.medoid.ai/blog/machine-learning-in-anti-money-laundering/

Topic Extraction, Event Detection	
Sector	Security
Abstract	Using NLP, tweets, and Named-entity recognition (NER) using SpaCy package we extract topics of the tweets. We can use the topic extraction to model event detection
Keywords	NLP, NER
Problem Solving Method	Supervised learning, batch and/or real-time data processing
Inputs	Tweets from API
Data frequency	TBD
Possible data sources	Twitter developer API or firehose
Others	https://towardsdatascience.com/twitter-topic-modeling-e0e3315b12e2

Degree Days and Geographic Multi-level Electricity Consumption	
Sector	Energy
Abstract	Modeling and forecasting regional electricity consumption. We calculate annual weather data using daily/hourly real-time temperature data for cooling degree days (CDD) and heating degree days (HDD). Using income, price, and the, calculated, temperature data, we model electricity consumption by utilizing machine learning. Then using the estimated model, we make forecasts for the electricity consumption
Keywords	Degree days (CDD, HDD), state-level electricity consumption, price, income, and population
Problem Solving Method	Supervised learning, real-time data processing
Inputs	Temperature hourly/daily data, electricity demand (consumption) data (dep.), Income (GDP/population), electricity price
Data frequency	Annual data (1990-2020) – Region: Riyadh, Saudi Arabia
Possible data sources	<ul style="list-style-type: none"> - Temperature Data: <ul style="list-style-type: none"> o Source: OpenWeatherMap (https://openweathermap.org/price) - Electricity Consumption 1990-2020: we have it in house <ul style="list-style-type: none"> o Source: Saudi SAMA (https://www.sama.gov.sa/en-US/EconomicReports/Pages/report.aspx) - Income 1970-2021: we have it in house <ul style="list-style-type: none"> o Source: Saudi SAMA (https://www.sama.gov.sa/en-US/EconomicReports/Pages/report.aspx) <p style="margin-left: 40px;">Location: search for GDP, choose: Gross domestic product by sector - At constant prices - Total</p> <ul style="list-style-type: none"> - Electricity Price: collected from ECRA reports – now called WERA (we have it in house)
Others	