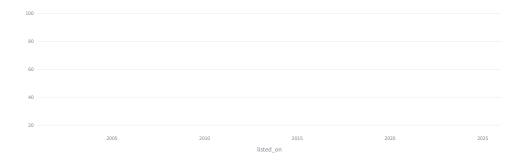
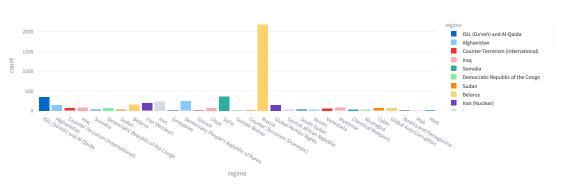


1 of 4 17/04/2025, 15:53

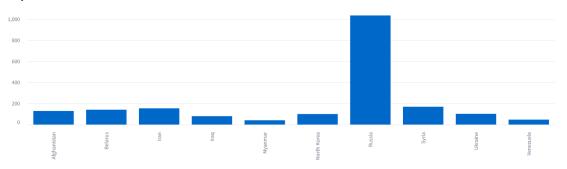


Top regimes

Frequency by regime

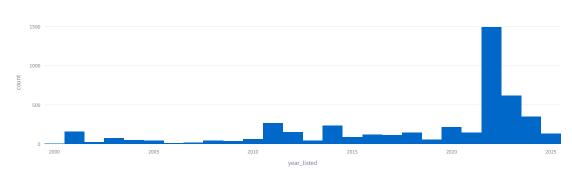


Top nationalities



Sanction timeline

Number of sanctions per year



Alias Analysis Center

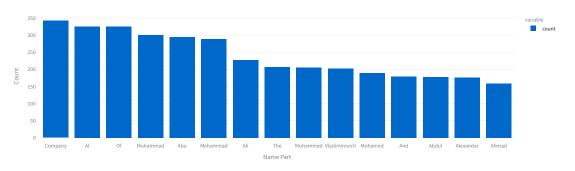
Distribution Frequency Patterns Lookup

Name Pattern Detection

2 of 4 17/04/2025, 15:53

Common Name Components

Most Frequent Name Parts



Find Similar Aliases



NLP Section

nlp = spacy.load("en_core_web_sm")

 $def \ extract_entities(text): doc = nlp(text) \ return \ [(ent.text, ent.label_) \ for \ ent \ in \ doc.ents \ if \ ent.label_in \ ["PERSON", "ORG", "GPE"]]$

st.header("NLP Insights")

#Relations etwee entities st.subheader("Knowledge Graph: Relationships between Entities")

100 text

 $sampled_infos = filtered_df['other_information']. dropna(). sample(n=100, random_state=42) \ docs = list(nlp.pipe(sampled_infos, batch_size=20)) \ docs =$

Graph

 $G=nx.Graph() \ for \ doc \ in \ docs: \ entities=[(ent.text, ent.label_) \ for \ ent \ in \ doc.ents \ if \ ent.label_in \ ["PERSON", "ORG", "GPE"]] \ for \ in \ range(len(entities)): \ for \ j \ in \ range(i+1, len(entities)): \ G.add_edge(entities[i][0], entities[j][0])$

Limit

if len(G.nodes) > 100; G = G.subgraph(list(G.nodes)[:100])

 $plt.figure(figsize=(12,8)) \ nx.draw (G, with_labels=True, node_color='skyblue', edge_color='gray', node_size=1500, font_size=10) \ st.pyplot(plt) \ number (plt) \ numbe$

Word Cloud

 $st. subheader("Word Cloud from Other Information") text_data = "".join(filtered_df['other_information'].dropna().tolist()) wordcloud = WordCloud(width=800, height=400, background_color='white').generate(text_data) st.image(wordcloud.to_array(), use_column_width=True)$

Frequency Analysis

3 of 4 17/04/2025, 15:53

 $st. subheader("Frequent Terms in Descriptions") \ vectorizer = Count Vectorizer(stop_words='english', max_features=30) \ X = \\ vectorizer.fit_transform(filtered_df['other_information'].dropna()) \ frequencies = pd.Series(X.toarray().sum(axis=0), index=vectorizer.get_feature_names_out()) \\ st.bar_chart(frequencies.sort_values(ascending=False))$

Sample Entity Extraction

 $st. subheader("Sample Named Entity Recognition Examples") sample_texts = filtered_df["other_information"]. dropna(). sample(5, random_state=42). tolist() for idx, text in enumerate(sample_texts): doc = nlp(text) st.markdown(f"### Example {idx+1}") st.write(f"Original text: {text}") if doc.ents: ents_data = [(ent.text, ent.label_) for ent in doc.ents] ents_df = pd.DataFrame(ents_data, columns=["Entity", "Label"]) st.dataframe(ents_df) else: st.info("No named entities found in this sample.")$

4 of 4