Project Hooked

Kwa Kah Boon, Loh Jiahui, Neo Yixin

Goals and Motivation

Estimating the size of the illegal fishing industry is challenging due to its clandestine nature. Illegal, unreported, and unregulated (IUU) fishing often involves concealed activities, misreported catches, and illicit trade, making it difficult to obtain precise figures. However, according to the Global Initiative Against Transnational Organized Crime, the value of global illegal fishing activities is estimated to be between $10 billion and $23.5 billion annually.

Some common motivations for illegal fishing include high profit margins, strong global demand, poverty and lack of alternative in areas where economic opportunities are limited, and this is usually further exacerbated by weak governance and enforcement.In order to avoid detection and mask their activities, these companies tend to adopt certain approaches such as the creation of shell companies, choosing to operate under the flag of a country that has lenient regulations or misreport and falsify documentations such as catch reports.

As such, this project aims to help users explore data from the fishing industry through 3 different lenses; Network, Finance and Country, with the goal of potentially identifying clusters of businesses that show higher risks of illegal activities.

The Financial Risk

Companies or individuals with higher (or lower) than normal revenue and dealing with fishery products are of higher "financial" risks.

The Network Risk

Individuals who are connected to more than 1 company are of higher "network" risk than those who are merely associated with 1 company. This is because transhipments, which are highly associated with IUU, require at least 2 entities to be in cahoots.

The Country Risk

Certain countries, with more fishery companies and individuals residing in them, are of higher country risk as our literature review shows that IUU tends to occur in countries with lesser regulations and enforcement.

Customised Solution

Based on your data exploration, users can select variables deemed key in identifying IUU related entities. This module would help cluster and highlight subgraphs that score highly, e.g., high number of associated countries, high total revenue, large network size. Users can then conduct a further deep dive to understand these identified clusters.

Network Anomalies

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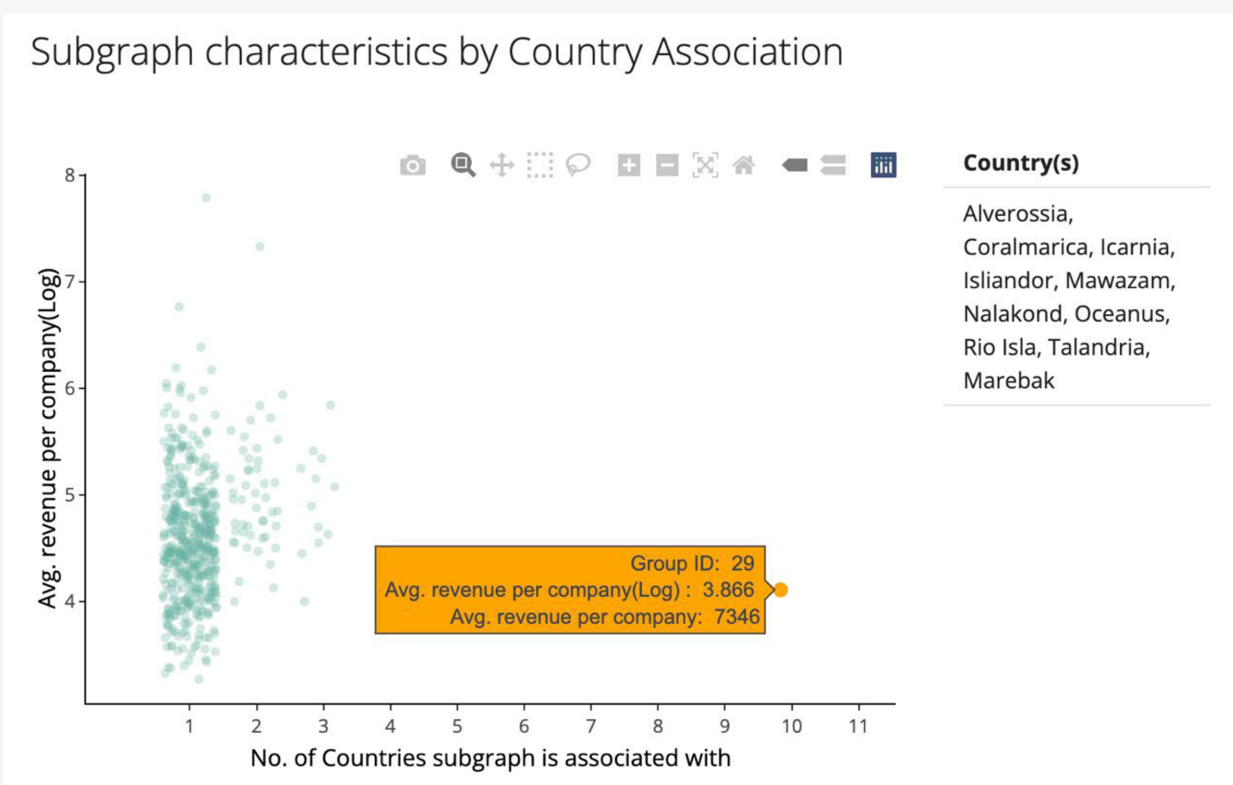

Revenue Anomalies

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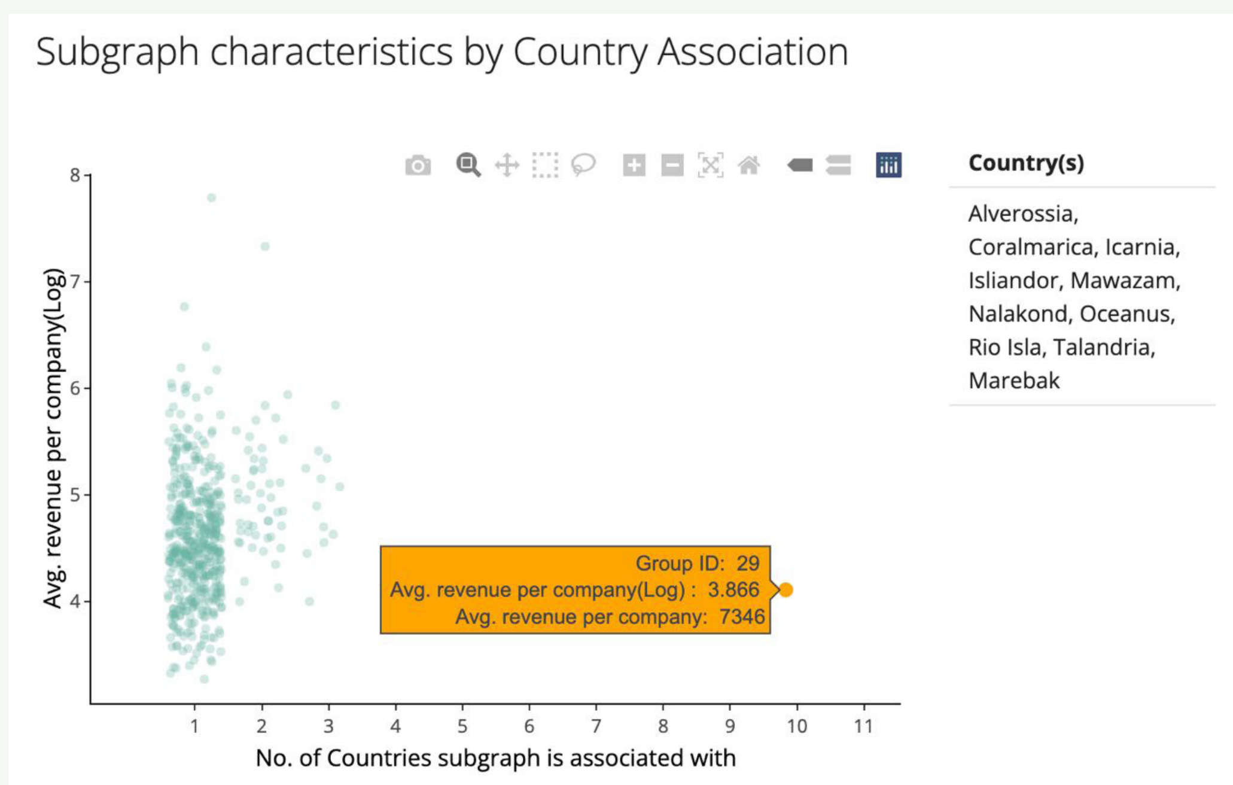
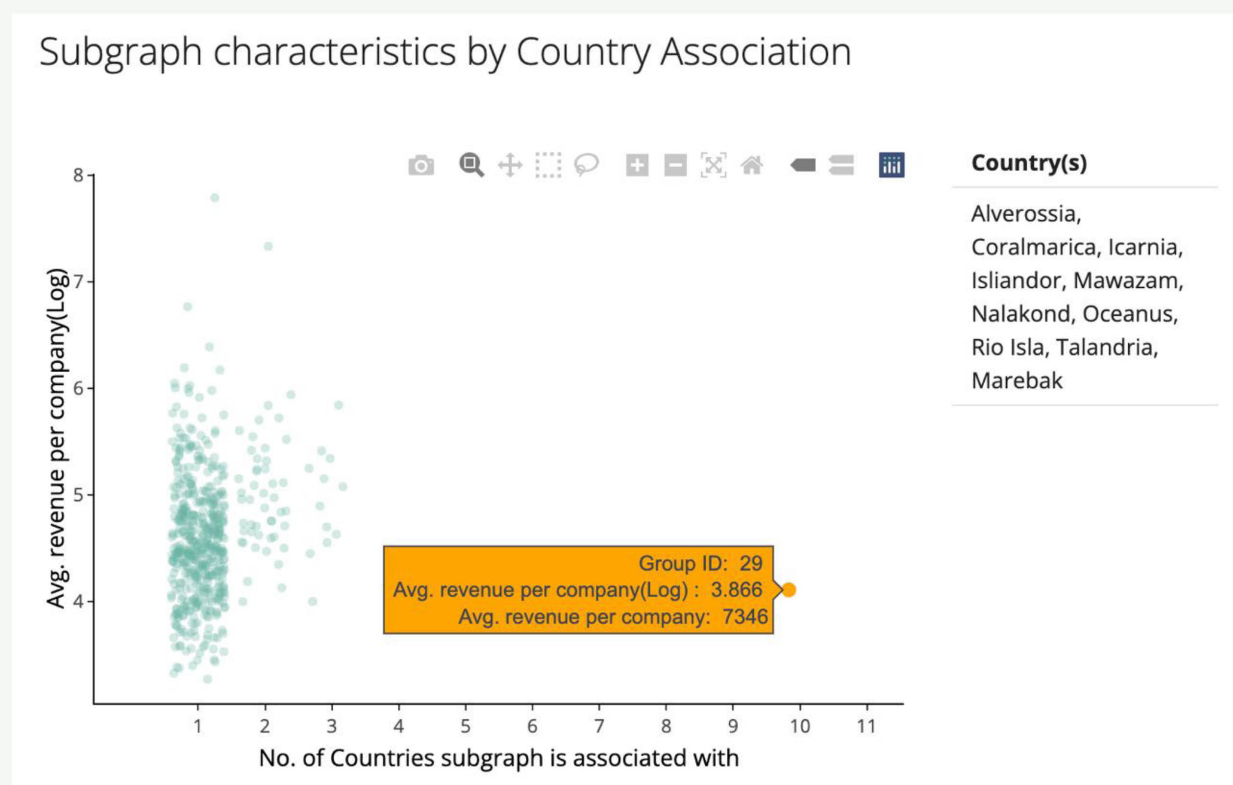


Country Association Anomalies

Through a scatterplot, subgraphs with traits that are out of the norm can be easily identified. For example, subgraph 29 having companies that are associated across 10 countries. This was significantly more compared to the industry norm. A closer look at this graph by revenue by entities, we observe that they tended to earn slightly below average, despite it's global network. This comes across as counter-intuitive, and there is value for FishEye to dig deeper and find out more.



Customised Solution - Heatmap

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