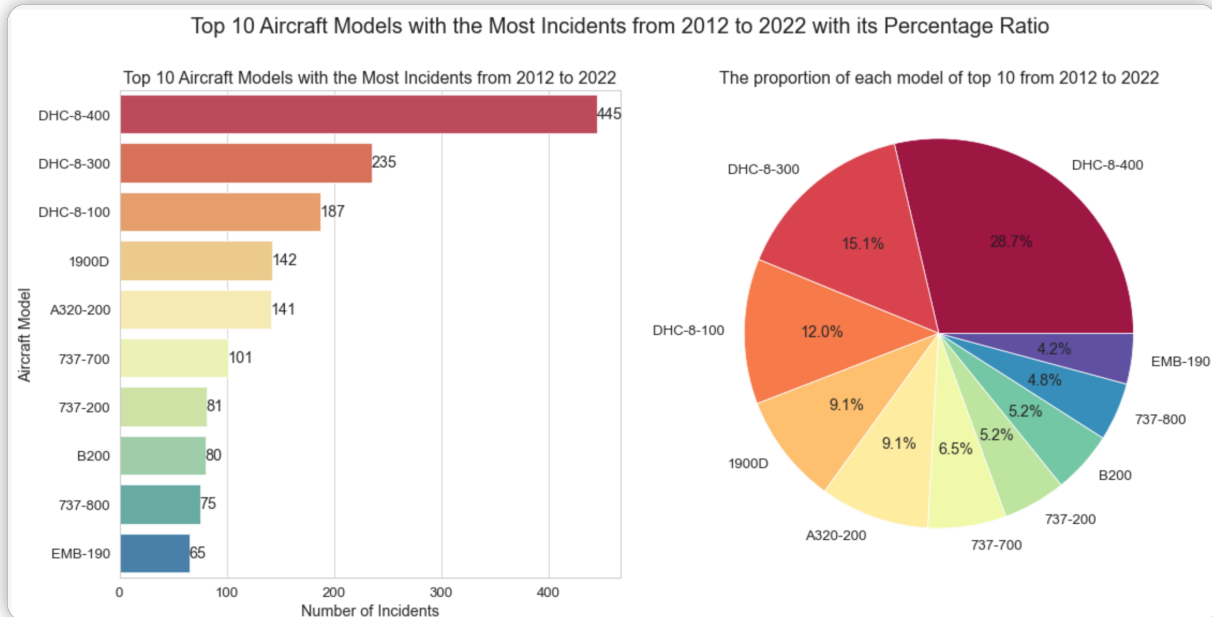


## Project checkpoint report

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### Visualization 1 (complete):

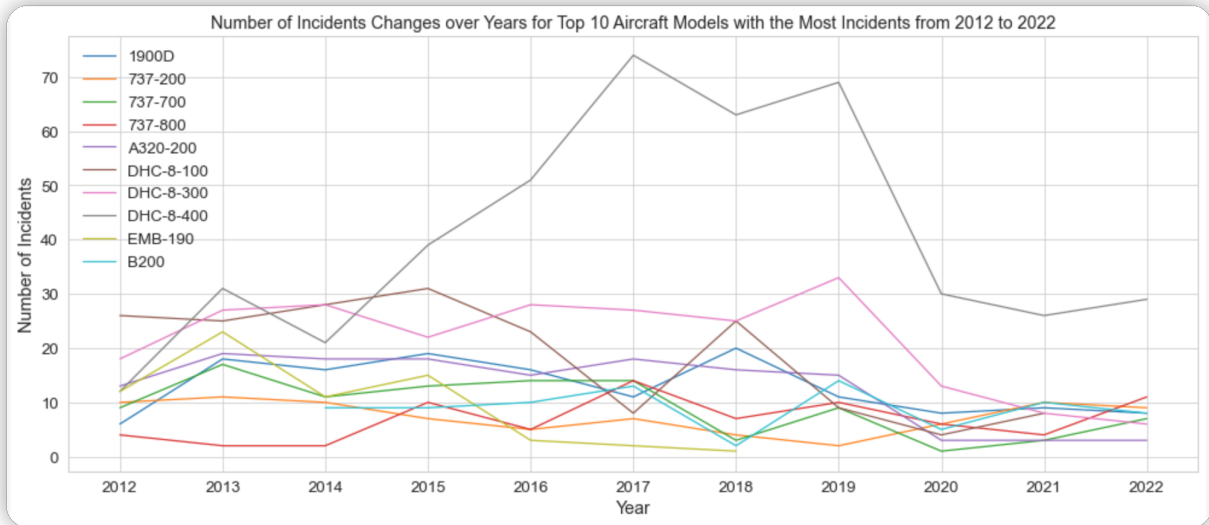


Type: explanatory

The visualization is aimed to illustrate what the top 10 models with the highest number of accidents in the last 10 years (2012-2022).

It can be observed that the top 3 models involved in accidents are all from the DHC-8 series. This suggests that there may be some flaws in the manufacturing or design of this series. The client should pay close attention to the DHC-8 series, especially the DHC-800 series, which accounts the most of all incidents (28.7%).

## Visualization 2:



Type: explanatory

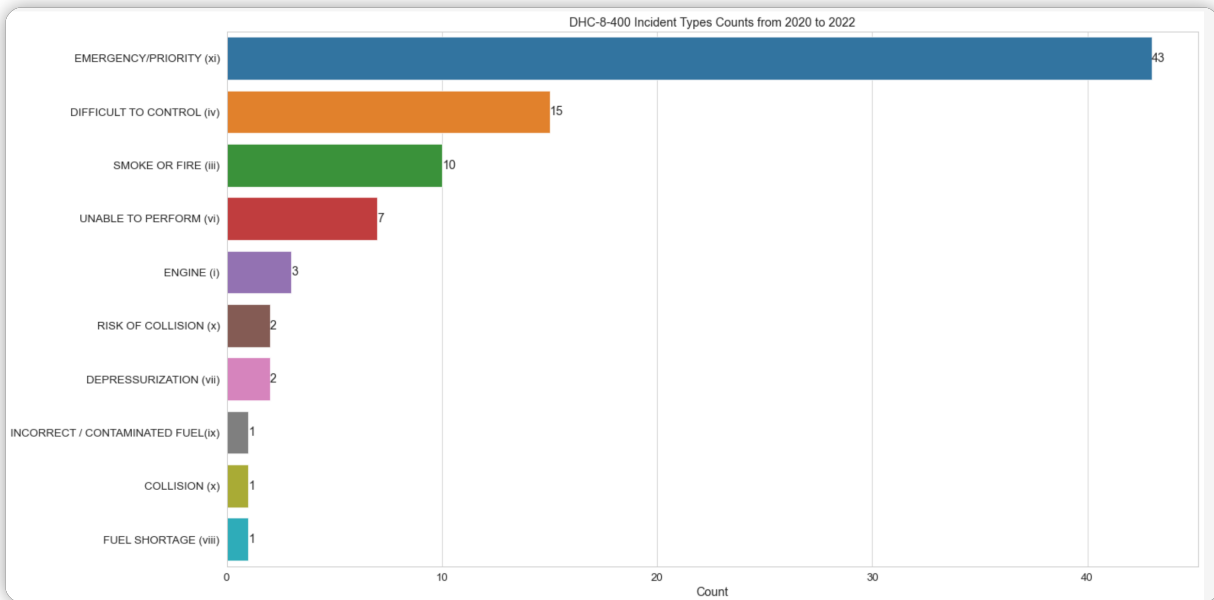
This chart shows the annual number of incidents for the top 10 models with the most accidents from 2012 to 2022. From the chart, it can be observed that:

The number of incidents for the DHC-8-400 is significantly higher compared to other models.

Both the DHC-8-400 and DHC-8-300 had a turning point in 2019, after which there was a significant decrease, indicating that the root causes of the incidents may have been addressed. However, it can be seen that the DHC-8-400 still has significantly higher incident rates than other models in 2020-2022.

Therefore, it is recommended that the client investigate the DHC-8-400 as soon as possible.

### Visualization 3:

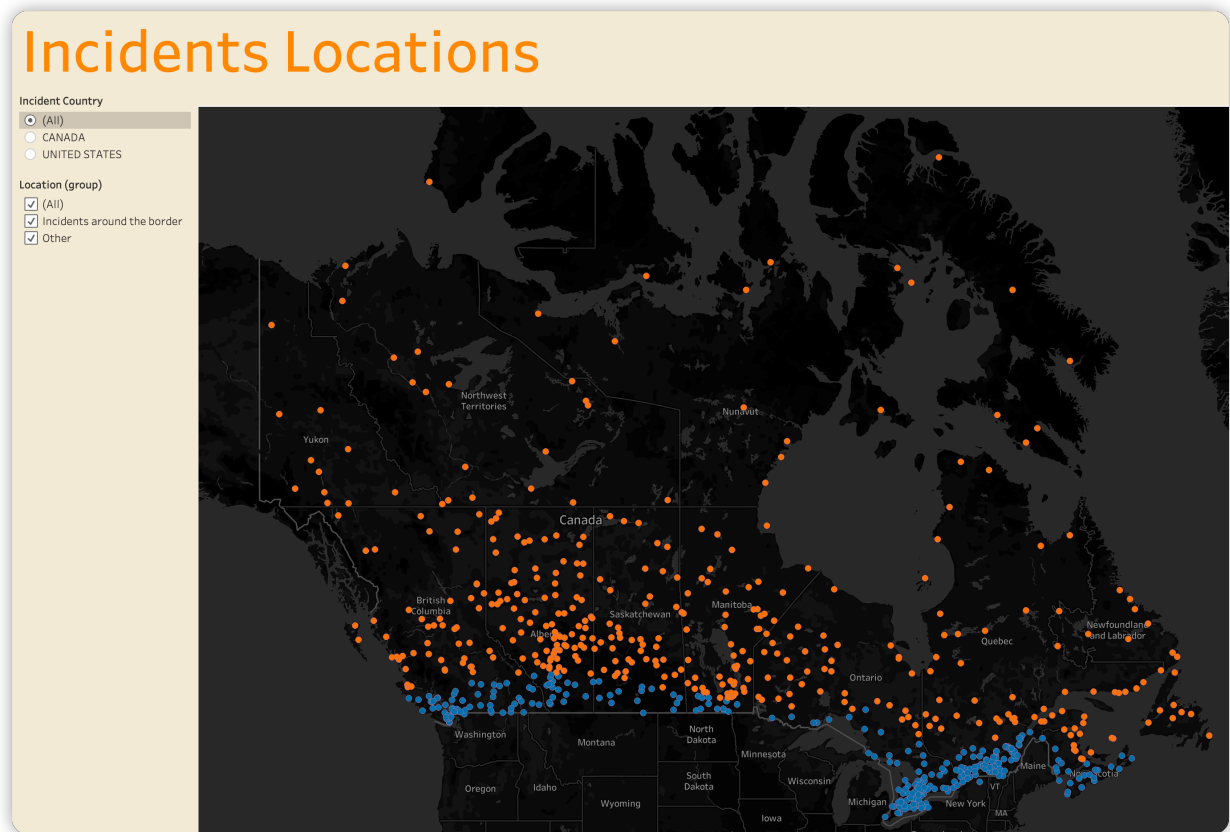


Type: explanatory

Based on the incident data from 2020-2022, it can be seen that EMERGENCY/PRIORITY is the most common cause of incidents for the DHC-8-400, and it stands out significantly. Therefore, it is recommended that the client investigate what causes EMERGENCY/PRIORITY for the DHC-8-400 as soon as possible. The second most common cause is DIFFICULT TO CONTROL, which should also be investigated.

Considering the three visualizations mentioned above, it is suggested that the client prioritize the investigation of what causes EMERGENCY/PRIORITY for the DHC-8-400 model.

## Visualization 4:



Type: exploratory

For now, I want my client to explore if the incidents happen around the Canada/US border or just happen inside Canada. And incident's location can also be filtered by Canada or US.