

Make Your Next Flight a Green Flight:

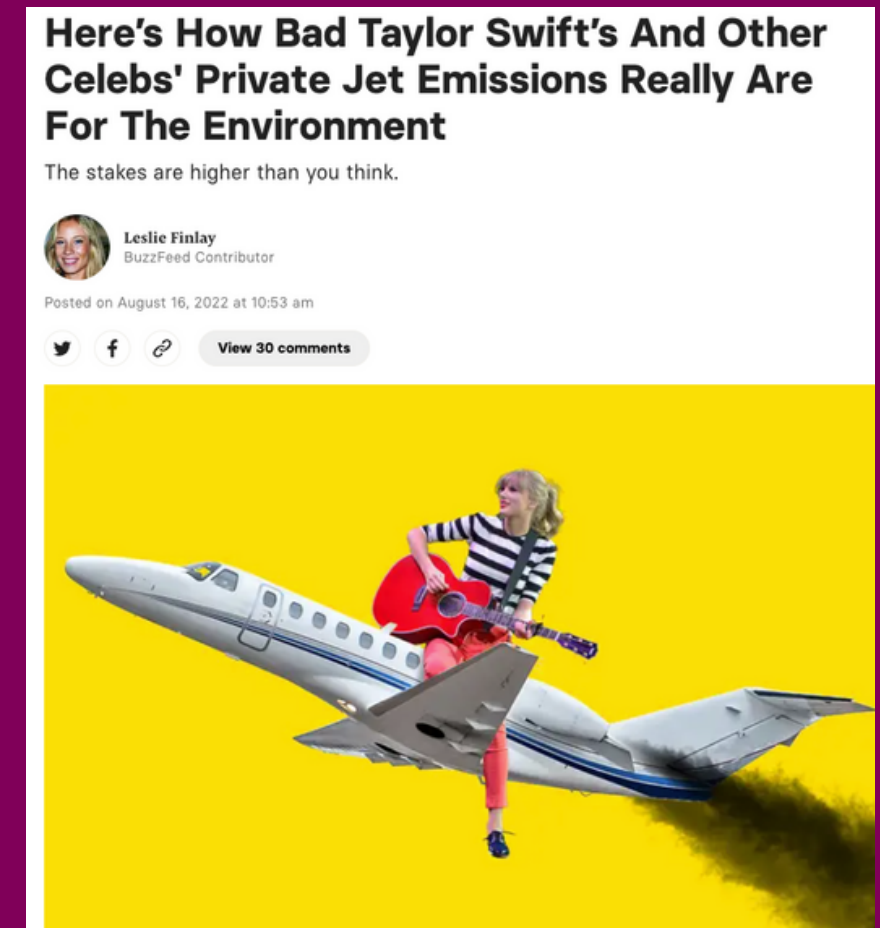
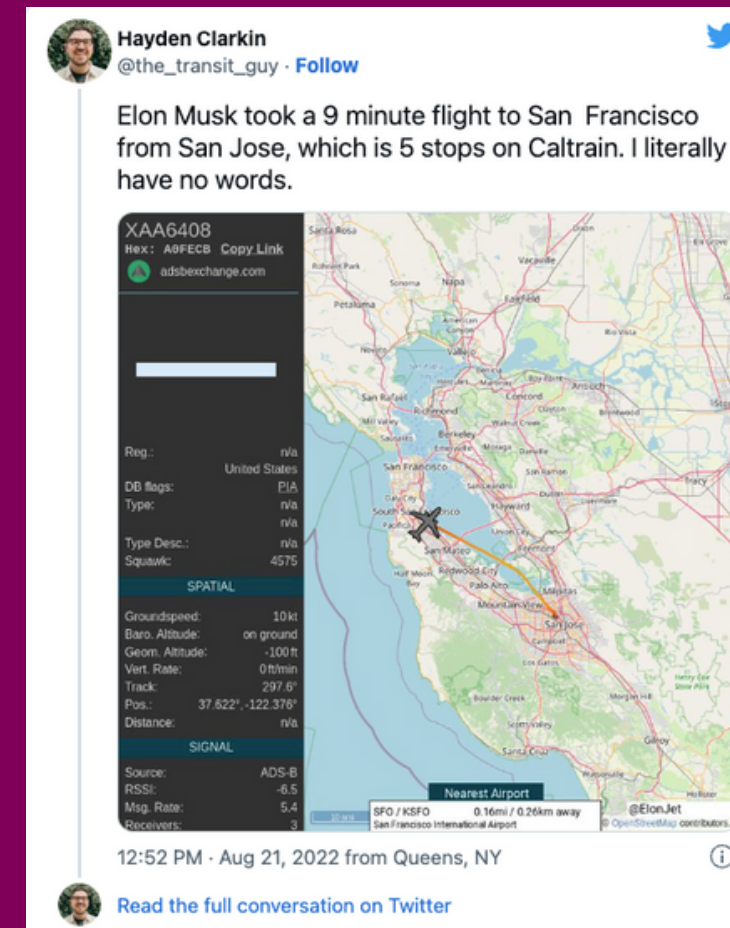
*Planning Better Trips to Reduce CO2
Emissions*

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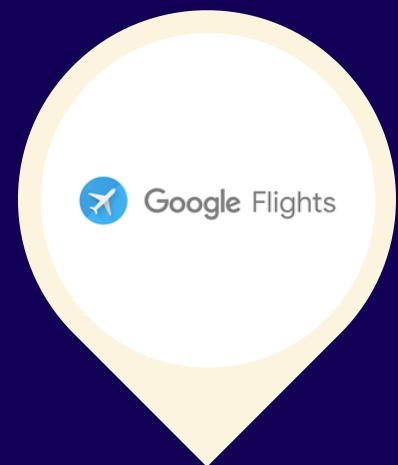


PROBLEM OVERVIEW

- 📍 People are more environmentally conscious about how they travel
- 📍 What can everyday people do to limit their impact on the environment when booking a flight?
- 📍 Provide the most environmentally friendly details for a given route



DATA OVERVIEW



~ 1M Rows
Airport Codes
Airline Operators
Aircraft Used
Fare Info (USD)
CO2 Emissions



+ Airport Coordinates
+ Standardize Timezone
+ Calculate Distances
+ Generate Routes



SCAN TO INTERACT



MODELING



Target: **Efficiency**

Distance Flown (km) per lb of CO2 Emissions

- High Efficiency / Utilization – 1
- Low Efficiency / Utilization – 0

MODEL	ACCURACY
LOGISTIC MODEL	0.88
LOGISTIC-PCA MODEL	0.88
SVM MODEL	0.87
DECISION TREE	0.86
RANDOM FOREST	0.97
XGBOOST	0.96



OPTIMIZED MODEL	ACCURACY
DECISION TREE	0.93
RANDOM FOREST	0.89
XGBOOST	0.97



TAKEAWAYS



- Short Intra-Country Trips
- Trips with 3 or more Stops
- Multi-Stop National Carriers
- Short-Range Aircraft

KEY MODEL FEATURES

Price Certain Airlines

Duration Certain Aircraft

of Stops

BRITISH AIRWAYS

TURKISH
AIRLINES

AIRBUS A320

787 DREAMLINER



- Long Cross-Country Trips
- Non-Stop Flights
- LCC or Select National Carriers
- Modern Long-Range Aircraft



📍 Benefits / Outcomes

- Individuals:
 - Book Trips Efficiently
- Stakeholders (Airline Operators)
 - Optimize Aircraft Fleet
 - Optimize Route Planning

BAGGAGE TAG

TO:

DUBAI

D

FLIGHT NO.

STRAP
CHECK

65



FINAL
DESTINATION

IST

FLIGHT
NUMBER

THANK YOU FOR LISTENING!

Happy Green Travels!

