What's My Flight Status?

By: Andre Layton

Overview:

The scope of science is incredibly vast and encompasses a wide range of subjects, disciplines, and areas of study. Science seeks to explore, understand, and explain the natural world through systematic observation, experimentation, and the application of rigorous methods. It plays a fundamental role in advancing knowledge, shaping our understanding of the universe, and addressing real-world challenges

Disciplines such as chemistry, physics, biology, astronomy or even recent ones such as computer science contribute to our knowledge and understanding of the world. Science is, simply put, constantly evolving, and interconnected, enabling us to explore and unravel the complexities of our natural world, from understanding the fundamental laws of the universe to getting to know the intricacies of life on Earth and beyond
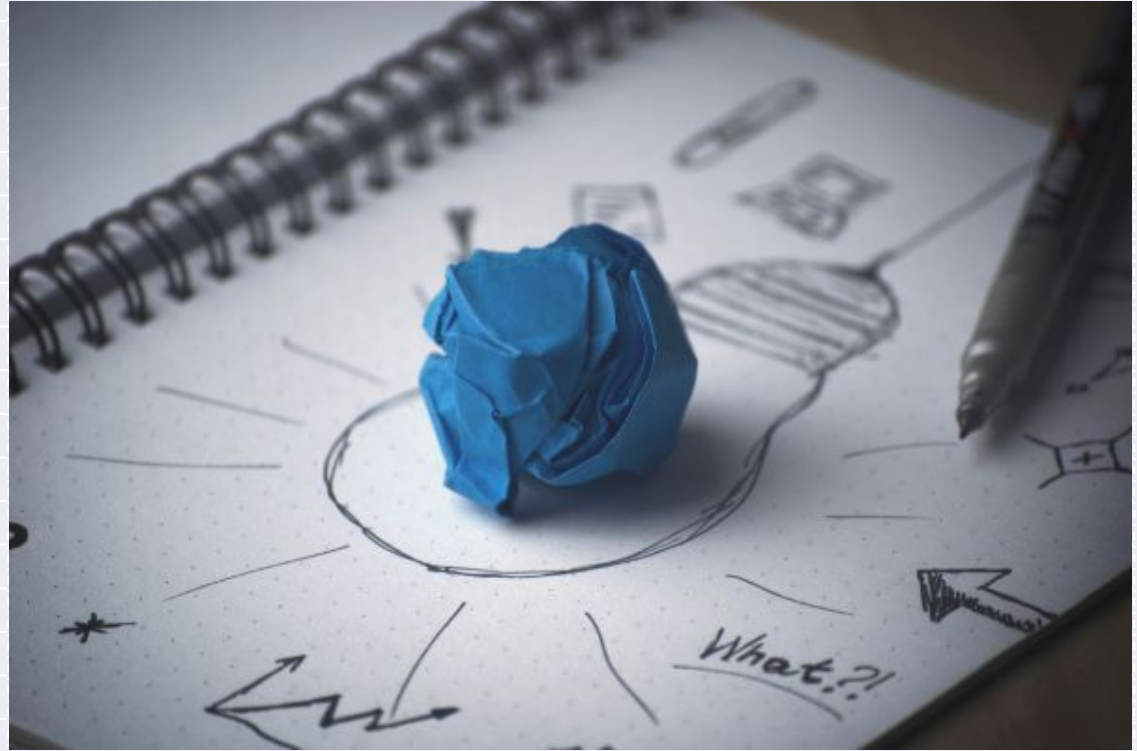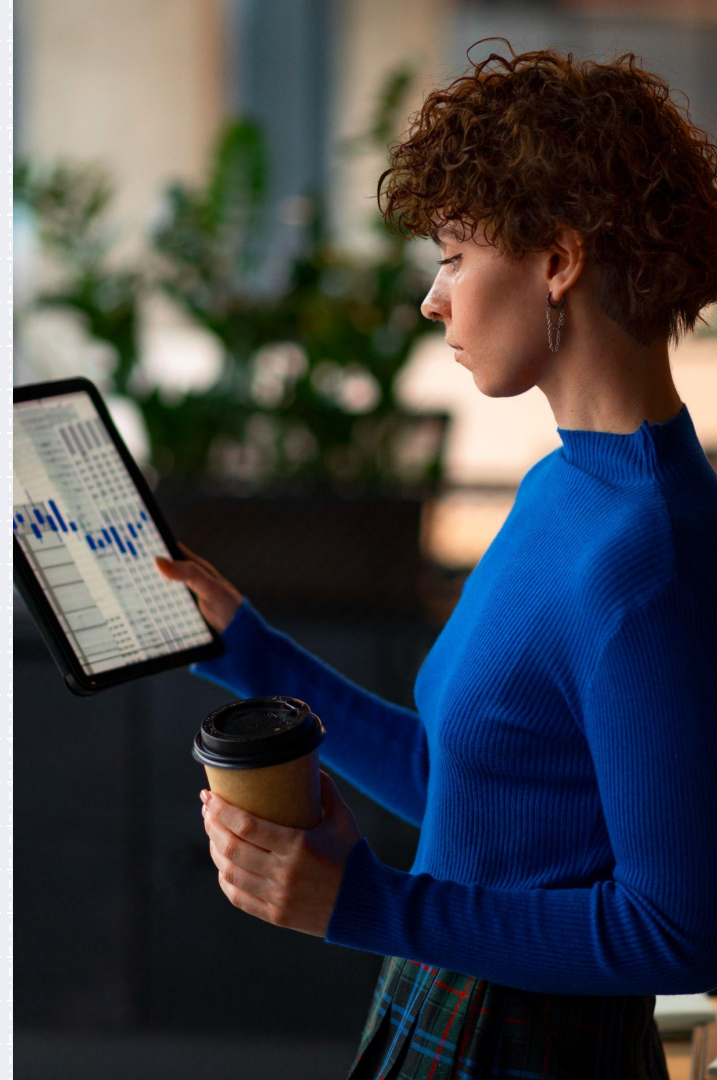
Outline:

Business Problem:

United Airlines is looking to regain consumer confidence by addressing their flight delays.

➜ Build an algorithm that will predict flight delays

➜ Use both machine learning and deep learning to build a precise model.

Data & Methods:

The Data:

- The initial dataset was gathered from Kaggle, and lists daily flight information from 2019 for every airport and airline, including weather data for that day.
  - ➔ The final dataset contains:
    -**582,939 United flights**.
    -**12 columns**, including the target.
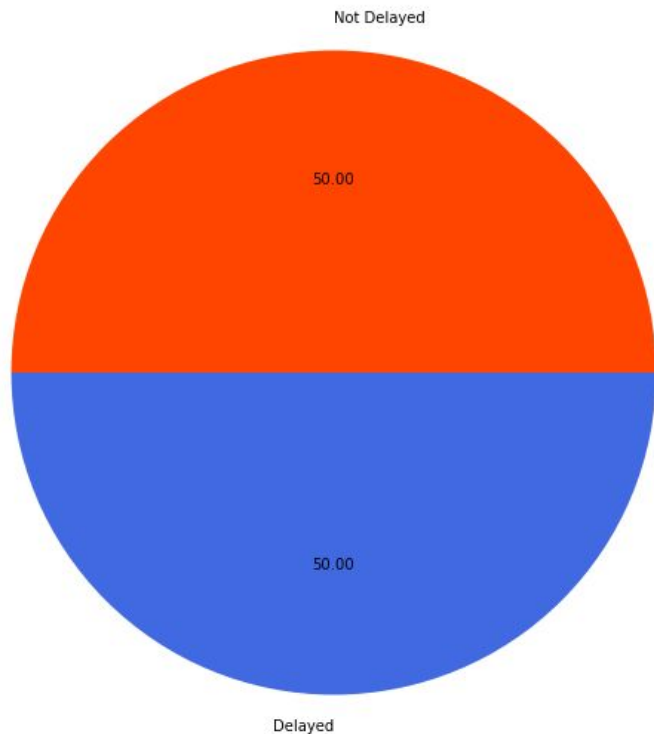
Class Distribution:

- The target variable was initially imbalanced:
  -**80. 18%** of United flights were on-time (not delayed)
  -**19.82%** of United flights were delayed

Class Distribution
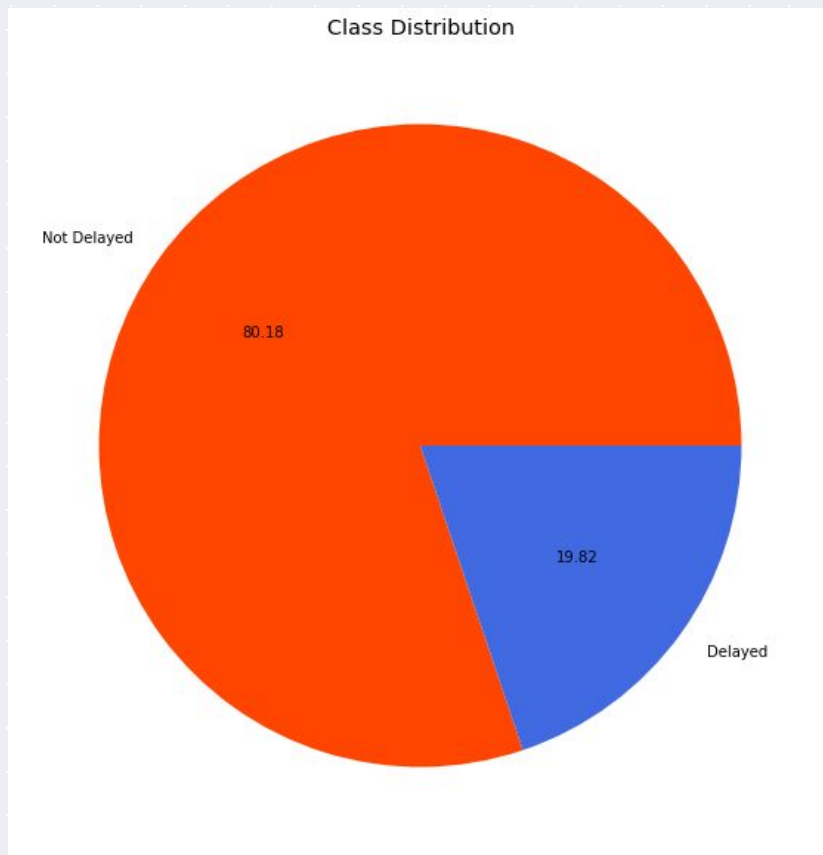
Data & Methods (cont.):

Class Distribution in the Training Data

Not Delayed

50.00

50.00

Delayed

Methods:

- Before modeling, I balance the data's target distribution before modeling.

Modeling:

Cultivate curiosity

Develop a strong sense of curiosity and an innate desire to explore and understand the world around you. Embrace a mindset of lifelong learning and intellectual curiosity

Embrace resilience

Science often involves setbacks and failures. Learn from these experiences, adapt, and persist in the face of challenges. Cultivate resilience, perseverance, and a growth mindset
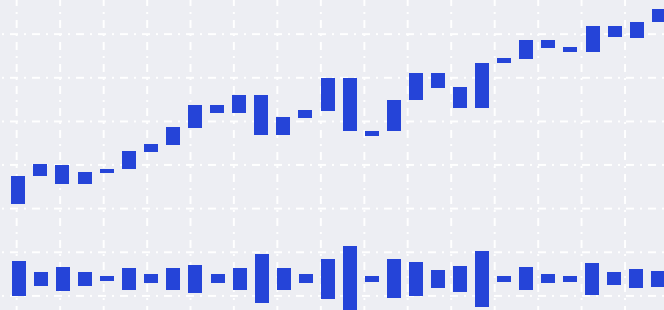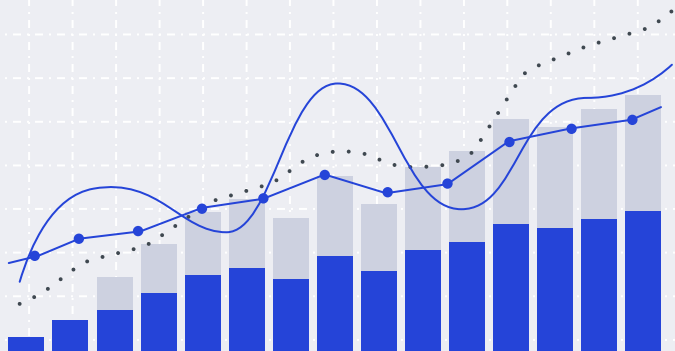
Modeling Results (cont.):

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- [Flat design stock market concept](#)

Conclusions:

Investigate the effects of climate change on coral reefs, focusing on a specific reef ecosystem. Explore changes in temperature, ocean acidity, and coral health to understand the broader implications of climate change on marine ecosystems

Instructions

- ➔ **Reef selection:** Choose a specific coral reef location for the case study. Consider factors such as its geographical location, biodiversity, and susceptibility to climate change
- ➔ **Data collection:** Simulate a data collection dive using virtual or real-life images of the coral reef. Collect information on water temperature, pH levels, and the health of coral species
- ➔ **Data analysis:** Collaborate with classmates to analyze the data. Identify patterns and potential correlations between climate change indicators and the condition of the coral reef
- ➔ **Adaptation strategies:** Brainstorm and discuss potential adaptation strategies to mitigate the impact of climate change on coral reefs. Consider both local and global initiatives

Thank You!

Do you have any questions? Contact me!

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Resources

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Vectors:
- Flat design stock market concept

Images:
- Person in the office analyzing and checking finance graphs
- High angle women working together at office

As a scientist, you will play a pivotal role in advancing human knowledge, solving complex problems, and driving innovation

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Modeling Results:

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NASA's Jet Propulsion Laboratory,
National Institutes of Health

Brazil

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Light Laboratory

India

ISRO, Indian Council of
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