In Just 8 Days, Major International Airline uses AI from Aible to Predict Flight Delays for Future Schedules

Company Profile

A leading US based airline that operates across six continents.

Industry

Airlines and Aviation

Region

US

Challenge

During scheduling, it is difficult to identify where flight delays are more likely to occur. Being able to identify potential issues more than 30+ days in advance would provide time to adjust the schedule to mitigate delays.
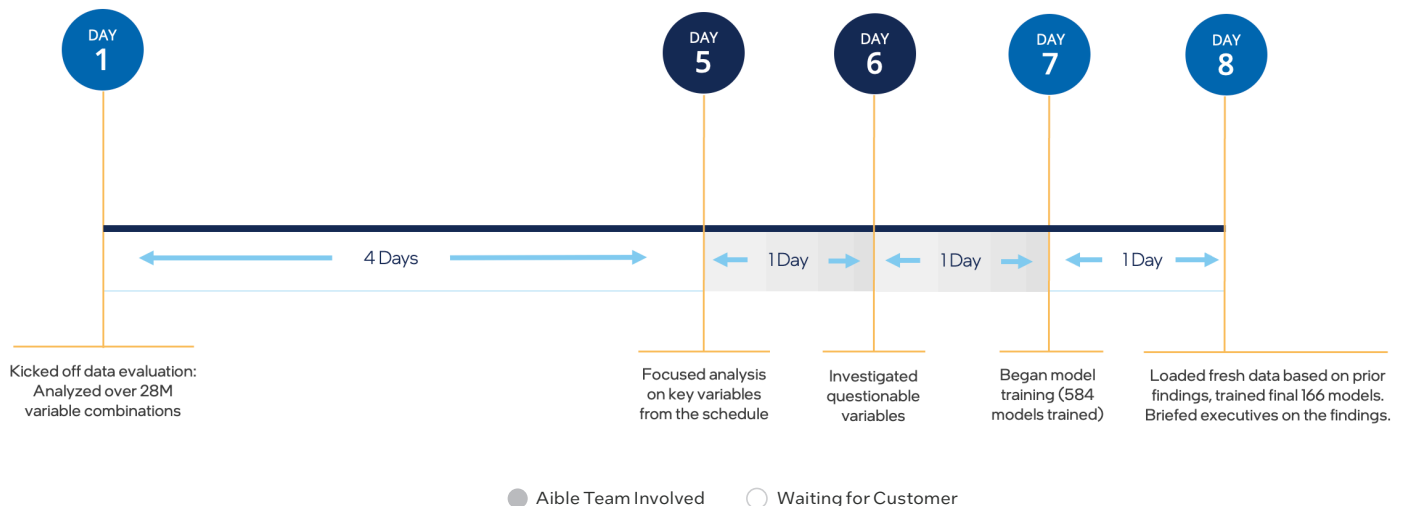
Solution

Began evaluating a dataset with over 28M variable combinations on day 1. Used Aible Sense & Explore to refine the dataset down to the critical factors. Refreshed the data based on the important variables identified. Trained 750 predictive models to identify future delays as soon as the schedule is published.

Use Case & Project Details

- **Use case analyzed:** Flight Delay Prediction

- **Potential Project Results:** Identified potential at-risk flights more than 30+ days in the future

- **Time from data provision to project completion:** 8 days

- **Elapsed time from start of model training to completion of 166 models on serverless infrastructure:** 10 mins

Outcome

Proactively identified thousands of at-risk flights, 30 days in the future.

DAY 1 — Kicked off data evaluation: Analyzed over 28M variable combinations

← 4 Days →

DAY 5 — Focused analysis on key variables from the schedule

← 1 Day →

DAY 6 — Investigated questionable variables

← 1 Day →

DAY 7 — Began model training (584 models trained)

← 1 Day →

DAY 8 — Loaded fresh data based on prior findings, trained final 166 models. Briefed executives on the findings.

● Aible Team Involved   ○ Waiting for Customer

"Aible Sense quickly identified the quality of our datasets and extracted the variables that contribute to delays. Just after few iterations of fixing data quality, we began training the model to deliver predictions."

- Senior Manager