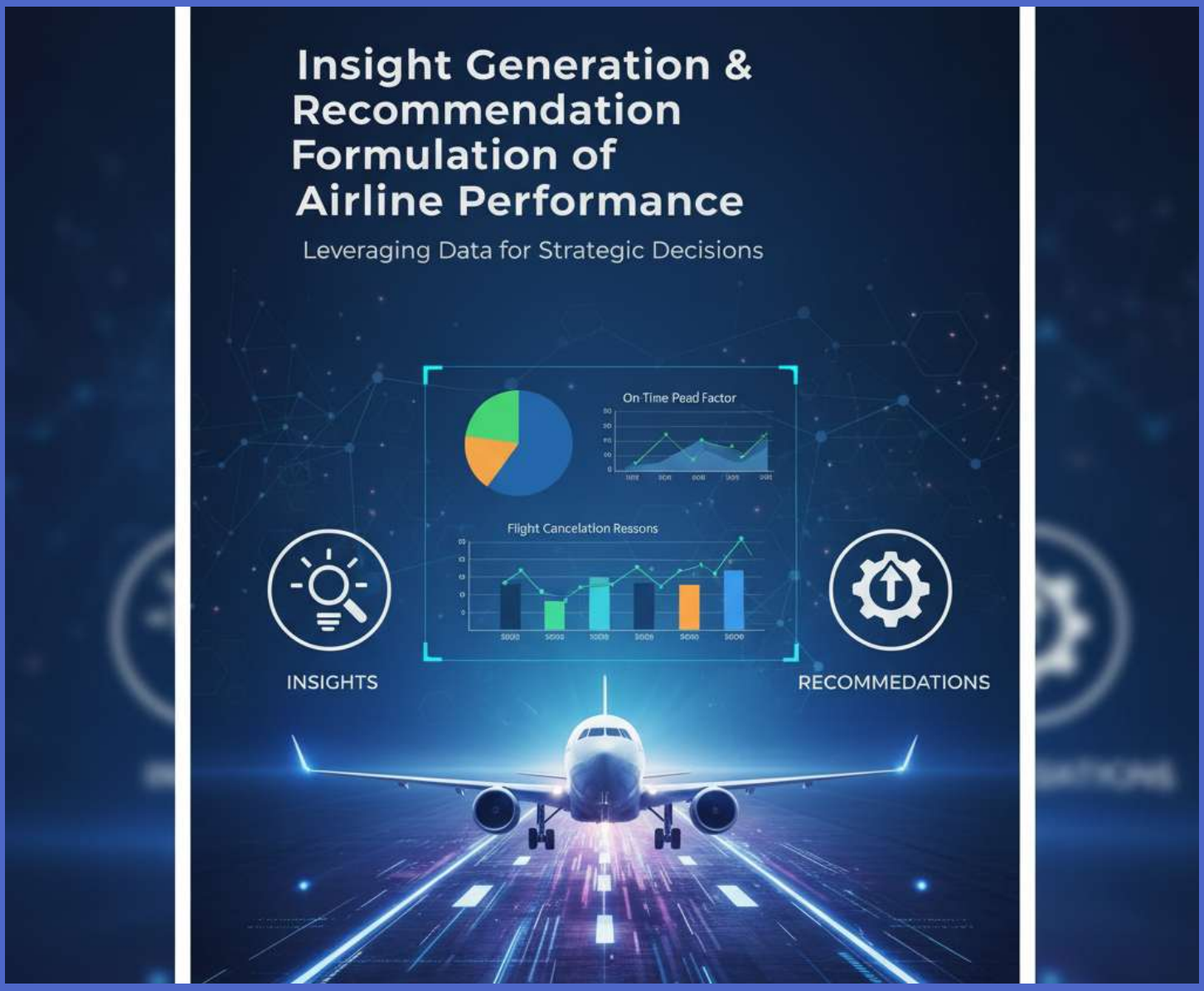
INSIGHT GENERATION & RECOMMENDATION FORMULATION REPORT

Airline Performance Intelligence



DATE: OCTOBER 8, 2025

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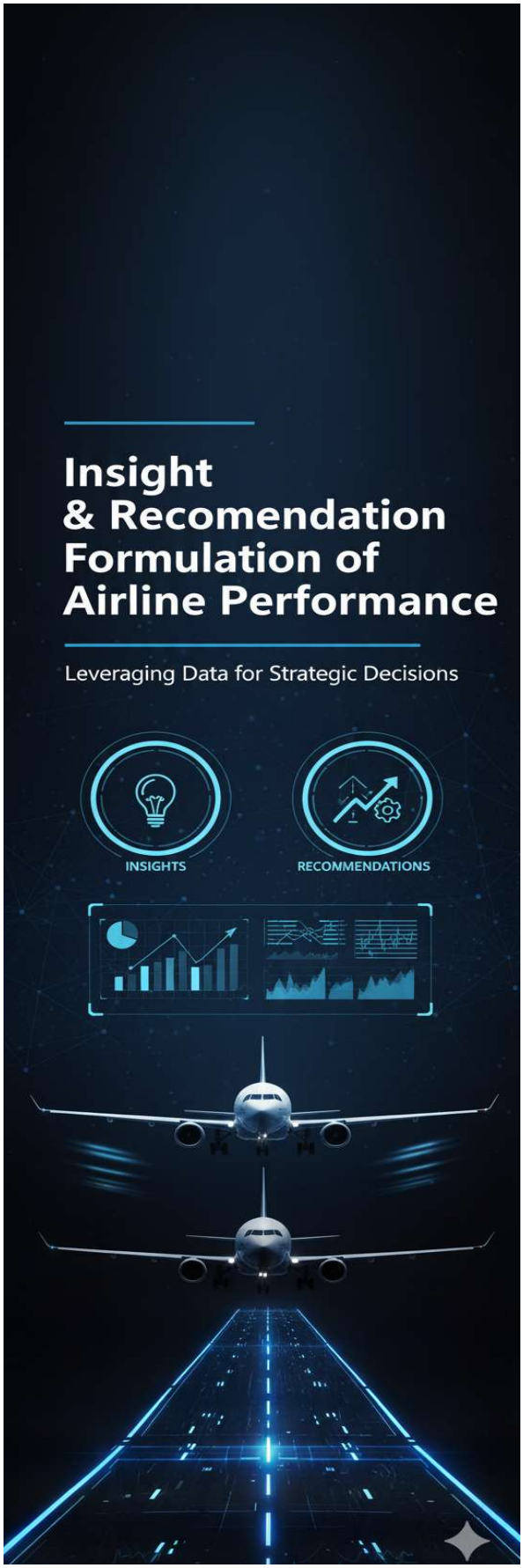
Project: Airline Performance Intelligence Dashboard

Key Findings (Simulated Data)

Focus Area	Key Finding
Airline Performance	Bottom 3 for OTP: American Airlines (AA), United Airlines (UA), Frontier (F9). AA has the lowest OTP at 81.2%.
Delay Drivers	Late Aircraft Delay is the largest contributor (40%), followed by Airline Delay (35%). Weather accounts for only 10%.
Worst Performer (AA)	AA's primary delay type is Late Aircraft Delay (55% of their total delay minutes), indicating turnaround inefficiency.
Airport Performance	Newark (EWR) and Chicago O'Hare (ORD) have the worst departure OTP. EWR's average delay peaks at 70 mins during 6–9 PM.
Temporal Trends	Delays peak in July/August and on Mondays. February shows best performance.

ANALYTICAL INSIGHTS (THE "WHY?)

- American Airlines' delay profile suggests internal operational inefficiencies, especially in aircraft readiness and gate turnaround.
- Late Aircraft delays dominate system-wide, indicating that cascading delays from previous flights are a major issue.
- Weather delays spike in Q3, particularly in Northeast hubs, due to seasonal storms and congestion.
- Monday delays may stem from weekend aircraft repositioning and crew fatigue.
- Evening delays at EWR and ORD reflect slot saturation and limited runway availability during peak hours.



RECOMMENDATIONS

(THE "HOW TO FIX IT")

1. **American Airlines (AA)**
   - Invest in gate turnaround optimization and aircraft readiness protocols.
   - Use predictive maintenance and real-time crew coordination tools.
2. **Q3 Weather Mitigation**
   - Deploy contingency staffing and rerouting protocols in Northeast hubs.
   - Use historical weather data to preemptively adjust schedules.
3. **Monday Delay Reduction**
   - Adjust crew rosters and aircraft rotations post-weekend to reduce fatigue-driven delays.
   - Introduce buffer slots for high-risk routes.
4. **EWR/ORD Optimization**
   - Collaborate with ATC for slot smoothing and gate reassignment.
   - Consider staggered departure windows to reduce congestion.

C O N C L U S I O N

This project demonstrates how data-driven dashboards can reveal operational bottlenecks and guide strategic decisions. The insights and recommendations are designed to help airlines and airport authorities improve punctuality, resource allocation, and passenger experience.