Data Science Digital Race 2025
Round 3 Question

Round 3: Real-World Data Challenge

Deadline: Sunday, 21/9/2025, 10:00 AM
Maximum Points: 100

INSTRUCTIONS

You will work with a dataset on airline passenger reviews.

1. Your submission must include:
- **A 5-slide presentation (PDF)** containing your analysis, insights, visualizations, and recommendations. You have flexibility in how you design and organize your slides.

2. Your submission must:
- Be submitted before the round ends. Late submissions will not be accepted.
- Be named using the following format: DSDR_R3_<TeamNameOrYourName>.pdf (e.g., DSDR_R3_UMDAC.pdf).

The use of large language models (LLMs) or other AI tools to generate answers, insights, or recommendations is **not allowed**. Any submission found using them will be disqualified.

Case Title: *"Flying Higher: Enhancing Customer Satisfaction in Airlines"*

Background:

You have just joined the analytics team of a leading international airline, renowned for its high standards in service and comfort. Lately, however, management has noticed that passenger satisfaction scores have stalled, and online reviews are revealing repeated issues that could impact loyalty and revenue.

Your mission is to **dive into the airline's treasure trove of customer feedback**, uncover what passengers truly care about, and pinpoint patterns behind both praise and complaints. Management is particularly eager to understand:

- Which elements of the flight experience make passengers happiest or most frustrated

- Recurring themes in reviews that could reveal hidden pain points

- How the airline stacks up against competitors across regions, routes, and travel classes

- Concrete strategies that could elevate passenger satisfaction and keep travelers coming back

As a data detective and consultant, your task is to **analyze the feedback, extract actionable insights, and present recommendations** that can help the airline soar above the competition.

DATASET INFORMATION

You are provided with the Airline Passenger Reviews Dataset (~128,000 reviews).

Key Features Include:

- Airline Name – name of the airline
- Overall Rating – satisfaction score (1–10)
- Review Title – short title of the review
- Review Date – when the review was posted
- Verified – whether the review is verified
- Review – passenger-written feedback
- Aircraft, Type of Traveller, Seat Type, Route, Date Flown
- Sub-ratings: Seat Comfort, Cabin Staff Service, Food & Beverages, Ground Service, Inflight Entertainment, Wifi & Connectivity, Value for Money
- Recommended – whether passenger would recommend the airline

This dataset provides a rich source of insights for understanding passenger experiences, detecting patterns in ratings and reviews, and suggesting improvement strategies.

TASKS

Analyze the airline reviews dataset and create a **5-slide slides presentation** that effectively communicates your findings. Your presentation should include:

1. **Passenger satisfaction overview** – distribution of overall ratings and general sentiment.
2. **Key drivers of experience** – which aspects (e.g., seat comfort, staff service, Wi-Fi, food) influence satisfaction the most.
3. **Text insights** – common themes in passenger feedback, highlighting complaints and praises.
4. **Benchmarking/segmentation** – comparisons across airlines, travel classes, or regions.
5. **Actionable recommendations** – concrete, data-driven steps the airline can take to improve customer experience and loyalty.

Participants are free to **organize the slides as they see fit**, but all five areas above must be covered.