UI/UX Decisions — Airline Predict (Streamlit)

Purpose

Airline Predict productizes a classification model that forecasts passenger satisfaction based on flight context and service ratings. The interface is designed for **Airline Customer Experience Managers** who need quick, repeatable scenario testing and actionable drivers.

1. Framing and workflow clarity

The UI explicitly communicates the task at the top of the page:

- Users are **simulating a passenger experience** to forecast satisfaction.
- Ratings are **inputs to the model**, not a historical survey report.

This avoids ambiguity (past vs. future) and aligns the UX with CX operational use.

2. Reduced cognitive load through progressive disclosure

Service ratings can be long and repetitive. To prevent fatigue and improve completion:

- Inputs are grouped by **journey moments** (Digital, Airport, Onboard, Service & Experience).
- Each group is an **expandable section** (Streamlit st.expander).
- Each section contains a short description to reinforce meaning and reduce ambiguity.

Outcome: faster scanning, less visual overload, higher form completion.

3. CSAT scale implemented as a 5-point Likert (with semantic guidance)

Service attributes use the 1–5 CSAT standard:

- 1 = Very dissatisfied
- 2 = Dissatisfied

- 3 = Neutral
- 4 = Satisfied
- 5 = Very satisfied

To improve data quality:

- Each field includes **microcopy** describing what is being rated.
- A consistent helper line clarifies the scale and reduces inconsistent interpretation.

4. Handling “0” as Not Applicable (not a low score)

In airline satisfaction datasets, 0 commonly means **Not applicable / Not used / Not rated**, not “very dissatisfied”.

The UI exposes this explicitly as **N/A**, preventing biased inputs and protecting model reliability:

- 0 is treated as “Not applicable”
- The **Average CSAT** calculation excludes N/A values
- This preserves clean CSAT metrics and prevents false negative bias

5. Live CSAT feedback to increase engagement and transparency

The UI displays **Average Service Score (live)** while users rate attributes.

Benefits:

- Immediate feedback encourages completion
- Reinforces the concept of CSAT
- Supports scenario testing (users can see how changes affect the score)

6. Prediction results presented as a product feature

The “Prediction Result” page is always visible as a navigation step, with a dedicated card for:

- Predicted class (Satisfied / Neutral / Dissatisfied, depending on the model)
- Confidence (when available)
- Average CSAT
- Top drivers (feature importance / SHAP-ready placeholder)

This makes the ML output interpretable and operational for CX prioritization.

7. Friendly validation and supportive UX writing

Validation avoids technical language and uses customer-support tone:

- Explains why a field is needed
- Suggests the next best action
- Minimizes blame (“please check”, “helps the model”, “for reliable prediction”)

This supports enterprise users and reduces friction under time pressure.

8. Action hierarchy

- **Run prediction** is the primary CTA (high emphasis).
- **Reset inputs** is intentionally a secondary link-style action to avoid accidental resets and prevent CTA competition.