Beta Presentation
Aircraft Appearance Assessment Tool

The Capstone Experience
Team United Airlines Quality Assurance

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Project Overview

• Automatic paint quality assessment of aircraft exteriors
  ▪ Manual uploads
  ▪ Gmail
• Search for aircrafts with specific identification number
• Sentiment analysis of tweets with images
• Interior/Exterior classification of images from Twitter
System Architecture

React

Flask

TensorFlow

Firebase

User

Tweepy

Google Client Library

API

Front End

Back End

The Capstone Experience

Team United Airlines Quality Assurance Beta Presentation
Edit Window
Dashboard Page

![Dashboard Page](image)

<table>
<thead>
<tr>
<th>Action</th>
<th>Picture</th>
<th>View more</th>
<th>Aircraft Number</th>
<th>Station</th>
<th>Destination</th>
<th>Picture relevance</th>
<th>Category</th>
<th>Sent Date</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run</td>
<td>![Picture]</td>
<td>View more</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>2023-04-03T12:12:25.014Z</td>
<td>0</td>
</tr>
<tr>
<td>Run</td>
<td>![Picture]</td>
<td>View more</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<td>2023-04-03T12:12:25.014Z</td>
<td>0</td>
</tr>
<tr>
<td>Run</td>
<td>![Picture]</td>
<td>View more</td>
<td>2022</td>
<td>N/A</td>
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<td>N/A</td>
<td>2023-04-03T12:12:25.014Z</td>
<td>0</td>
</tr>
</tbody>
</table>
Upload Page
Summary Page
What’s left to do?

• Front-End:
  ▪ UI updates
  ▪ Sign out page

• Back-End:
  ▪ Fix performance issues with heavy tasks

• Machine Learning:
  ▪ Fine-tune aircraft paint score model
Questions?