

zeroG

AI in Aviation 10 years at Lufthansa

Dr. Alexander Motzek
Head of Business Development

zeroG GmbH – Lufthansa Group

zeroG is our critical innovation partner for data-driven, human-centric AI solutions that empower us to deliver on our ambitious business transformation goals.



Xavier Lagardère

VP Data and innovation, Lufthansa Group &
Managing Director, Lufthansa Innovation Hub.

Lufthansa Group

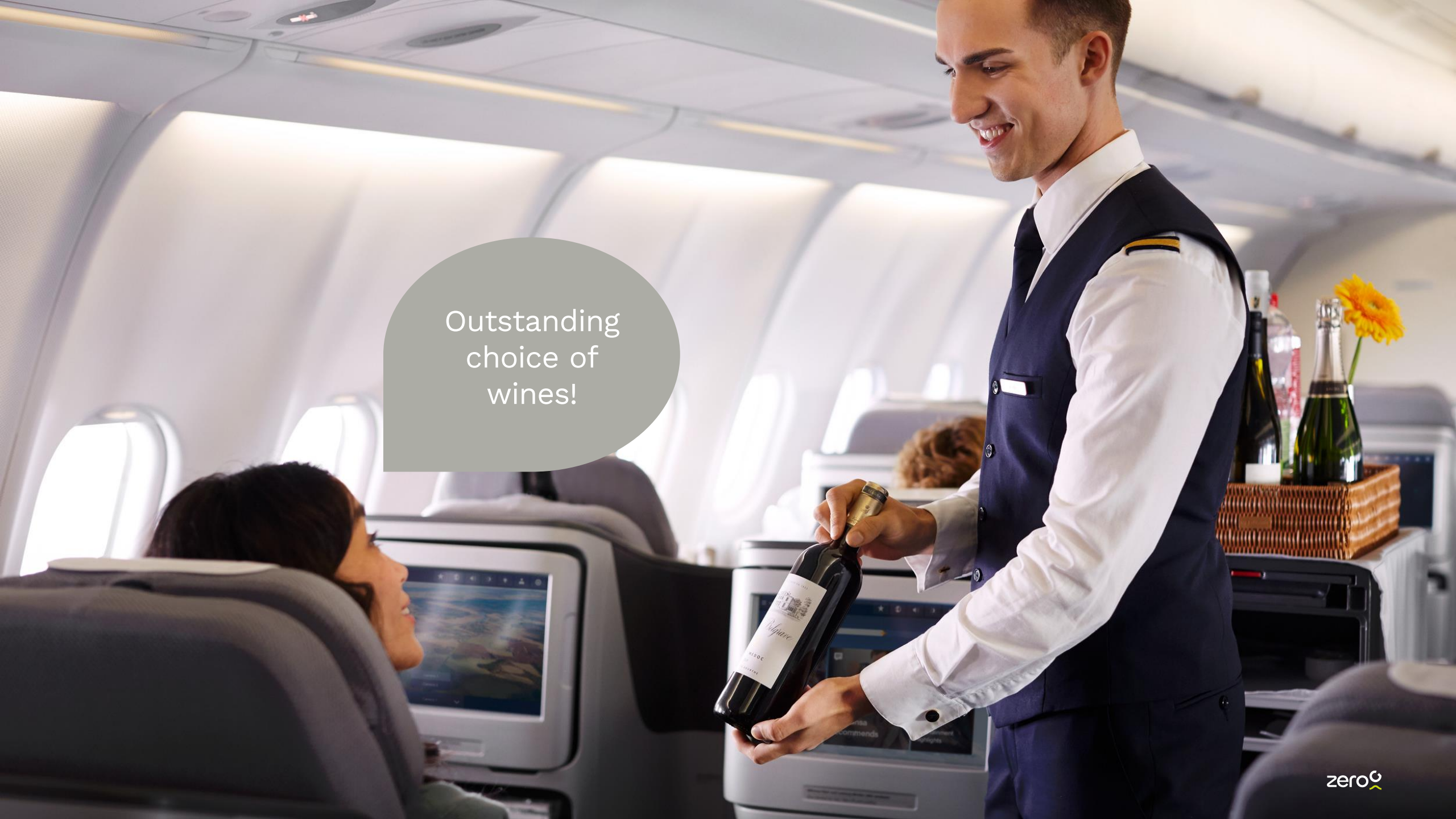


**Lufthansa
Innovation Hub**

We're here to answer one question:

What if we could reimagine aviation
through the power of data and machine
learning?





Outstanding
choice of
wines!

Outstanding choice of wines

outstand choic wine

Type of FAC 99%

Compliment

Functional area 42%

H - Last Mile Transport

Object category / Service 23%

Beverages

Detailed Cause

Severity 99%

minor

Department 49%

Transport

Cause

Affected product 46%

Wine



This
champagne is
not cooled
properly

This champagne is not cooled properly

champagn neg_cool neg_proper

Type of FAC 100%

Complaint

Functional area 33%

G - Outbound Dock

Object category / Service 57%

Beverages

Detailed Cause 99%

too warm

Severity 100%

minor

Department 80%

Other

Cause 99%

Food Quality - Temperature Deficiency

Affected product 47%

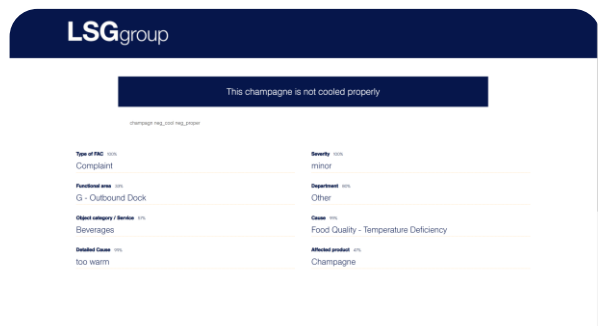
Champagne

2018

40.000 data points for training

Instant AI Classification

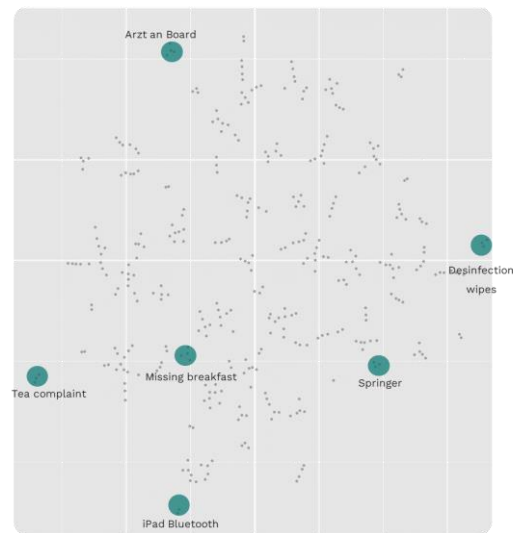
>99% Accuracy



2021

~300 data points

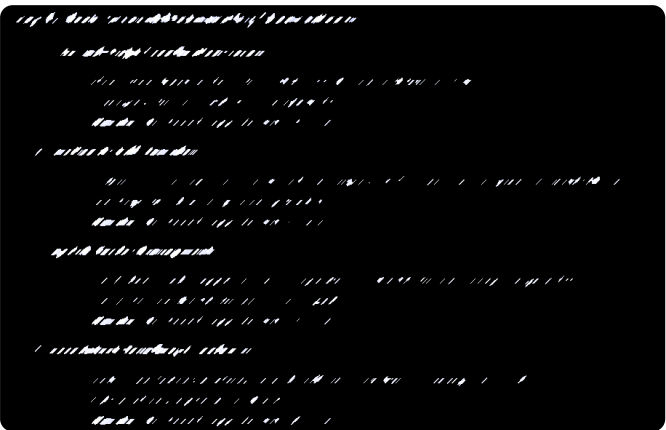
Revealing the Unknown



2024

0 data points

Direct Reports and Instant Crew Feedback



Trays Count
partially_eaten: 9 trays
untouched: 2 trays
fully_eaten: 4 trays

22: partially_eaten
23: fully_eaten
24: partially_eaten

tray-24



2019

Self-trained model

Early Prototypes



2024

LLM-based insights

Detailed Meal Statistics

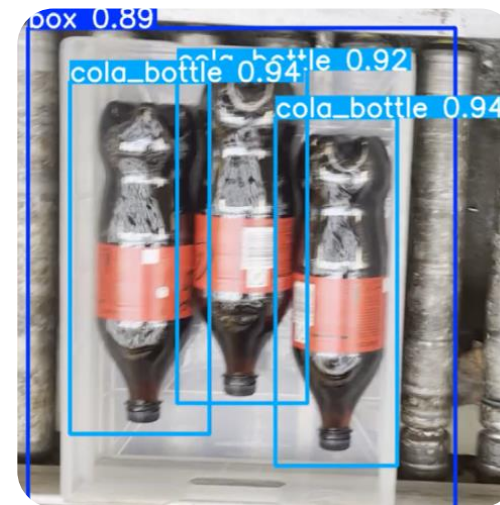


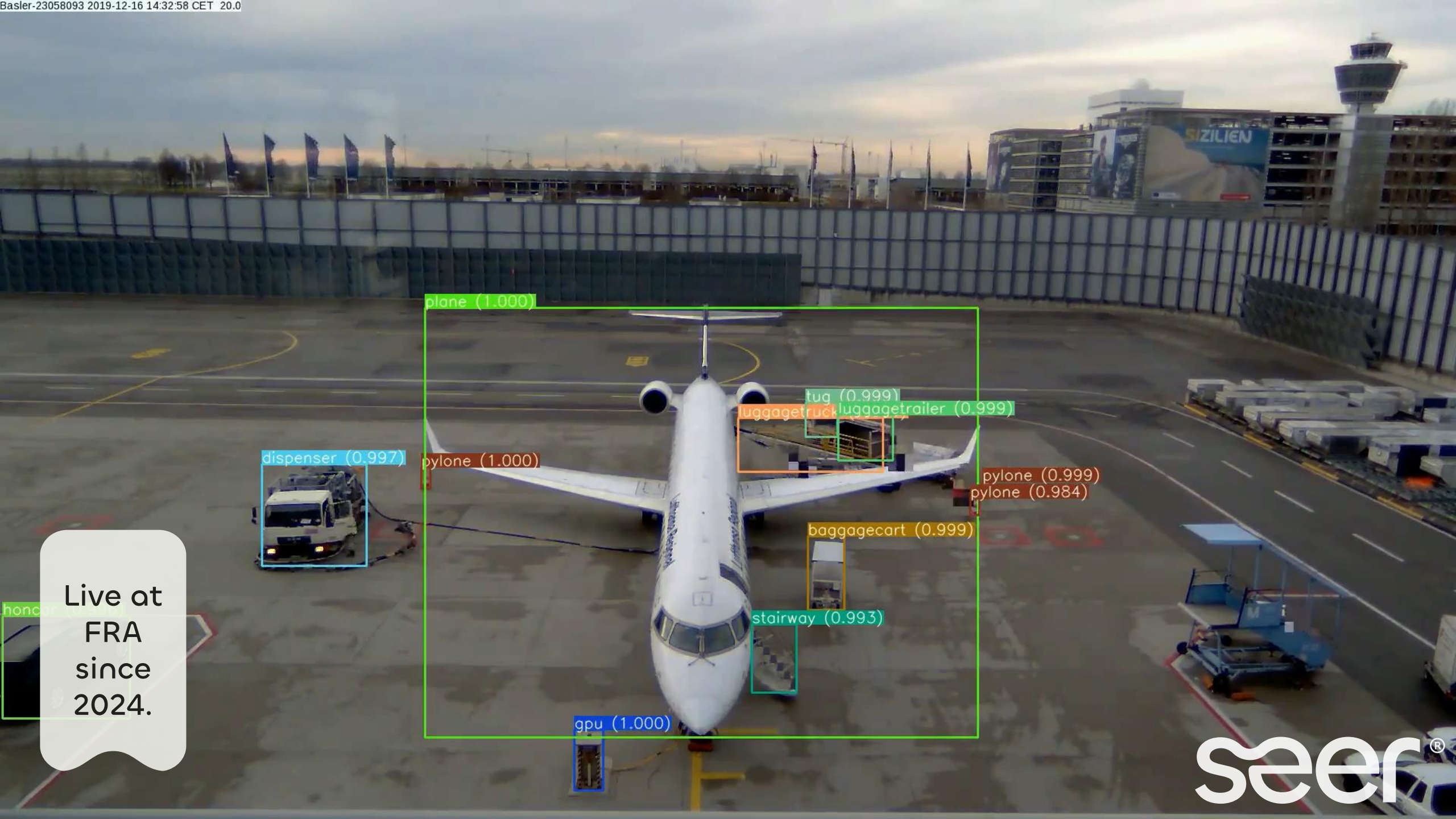
Classification: untouched; Untouched items: [Jelly jar, Dessert, Butter pieces, Cold Plate, Cutlery pack]

2025

Geometric Assumptions

Tackling Opaque Beverages





plane (1.000)

tug (0.999)

luggagetruck

luggagetrailer (0.999)

dispenser (0.997)

pylone (1.000)

pylone (0.999)

pylone (0.984)

baggagecart (0.999)

stairway (0.993)

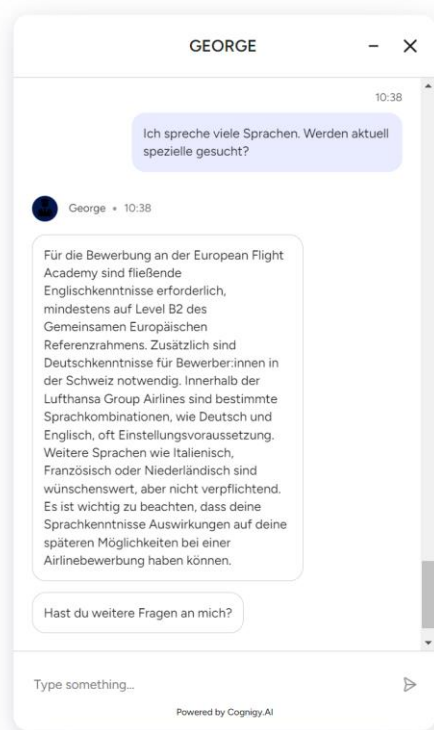
gpu (1.000)

Live at
FRA
since
2024.

01

Recruiting Pilots

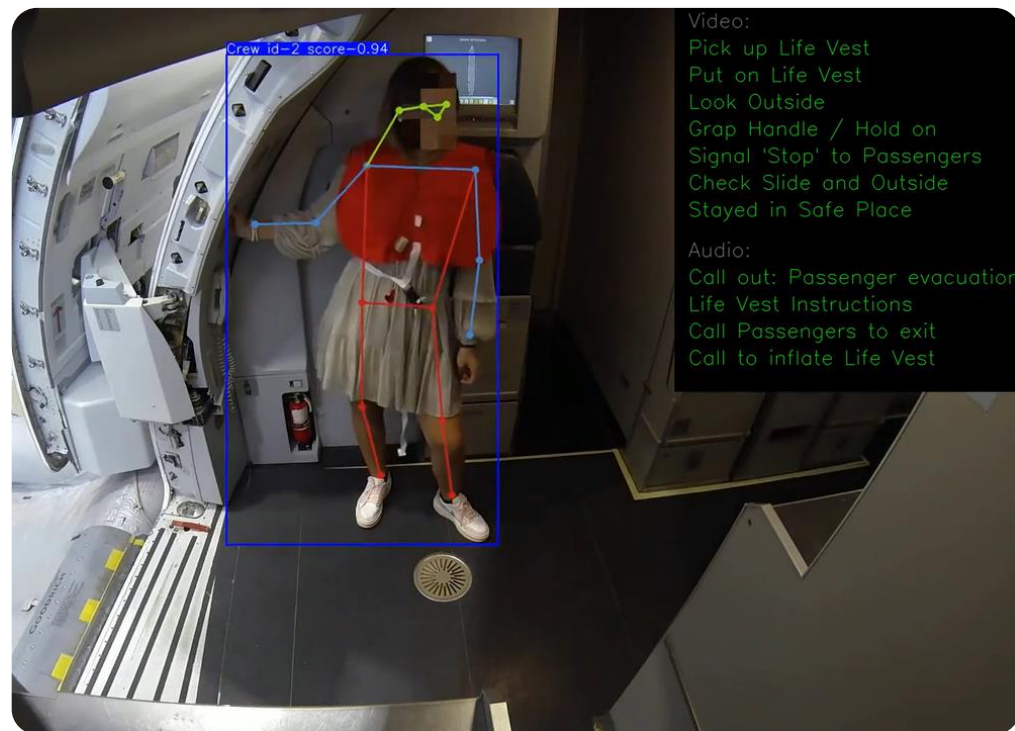
George



02

Training Cabin Crew

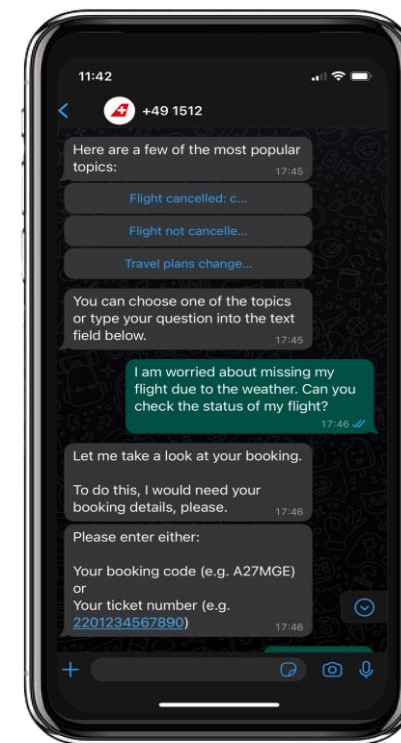
TESSA



03

Reaching 180M passengers

Elisa



10 years AI in Aviation

A glimpse of successfully delivered solutions in 10 years.



Ancillary Upsell & Recommendation

++ ancillary revenue



Customer Demand Prediction & ML Steering

++ accuracy

+ EBIT



Network Scenario Planning

Verify and share scenarios in 10 minutes



Roster Satisfaction & Standby Prediction

Reduce standby demand:
+++M€



Stable Predictable Operations

++ punctuality

-- cancellations



Predictive Maintenance & Digital Twins

++ lead time to failure

We are zeroG

10 Years

96 curious truth seekers

1 Office in Frankfurt

23 Different Passports

1 Booth D21

We believe diverse perspectives on fundamental challenges enable for new ways to tackle them holistically with data.

● Data Scientist

● Data Engineer

● Business Data Analyst

● Solution Architect

● Business Consultant

● Business Services



From FRA to SIN

Thank you! See you at D21

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