

Sandia National Laboratories FLIGHT PREDICTION

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Introduction

Background:

From unreliable sensors to emergencies and bad weather, when ground control loses contact with airplanes, it spells disaster for ground control, airlines, and government agencies.

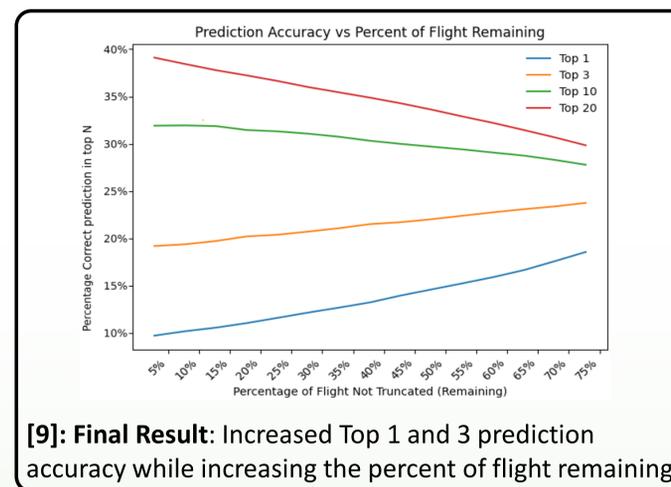
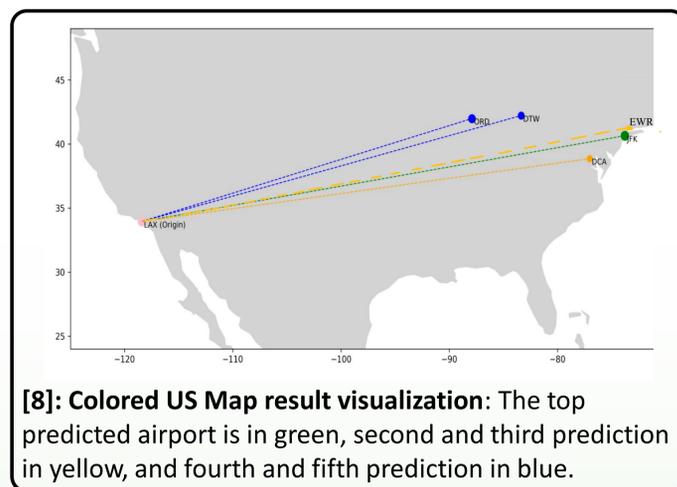
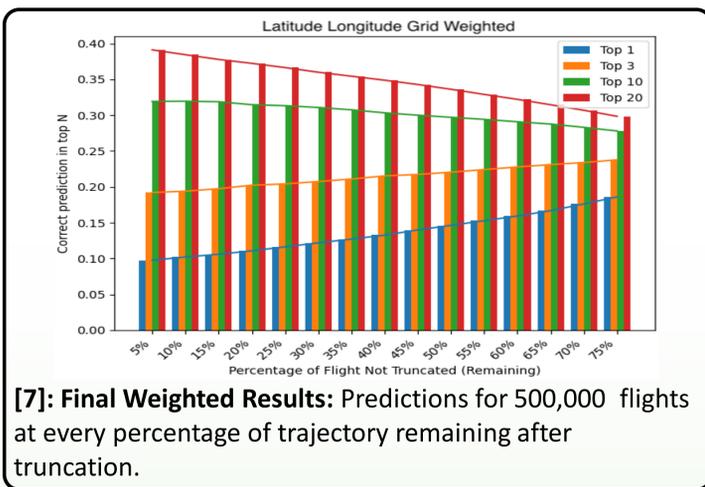
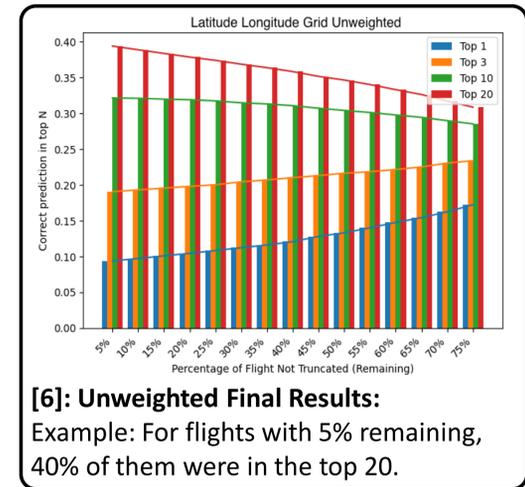
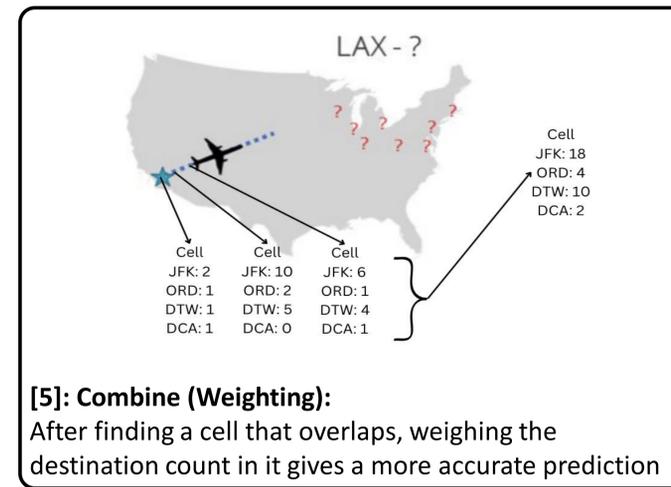
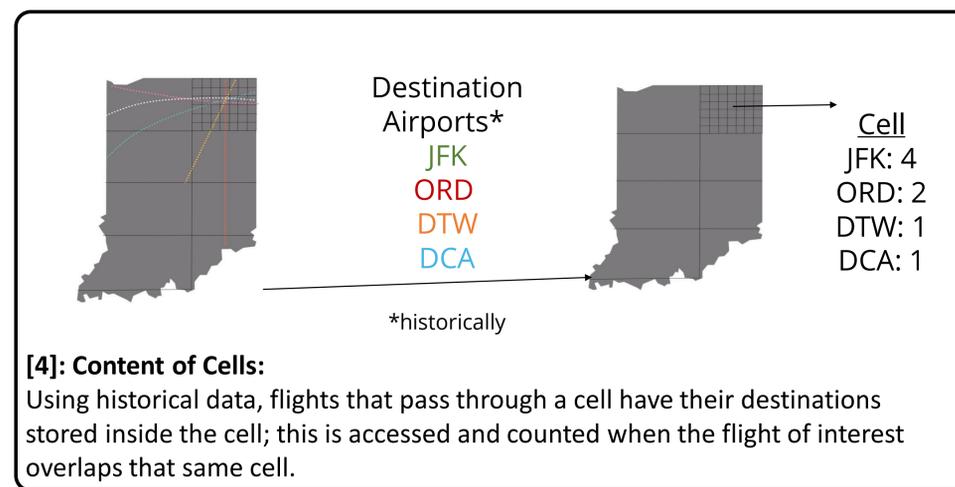
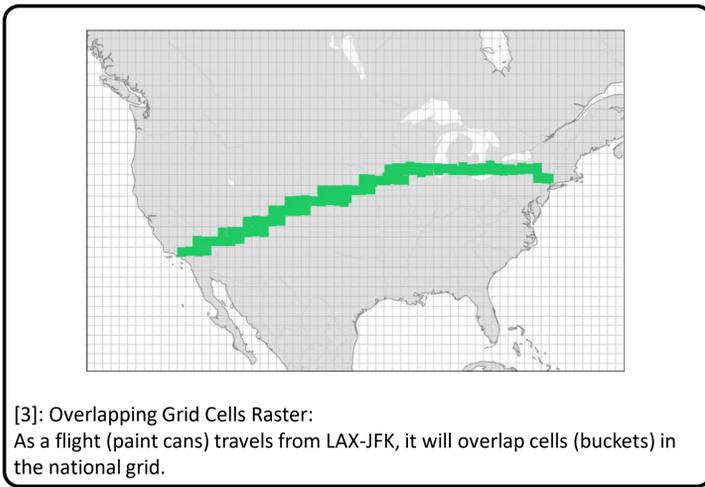
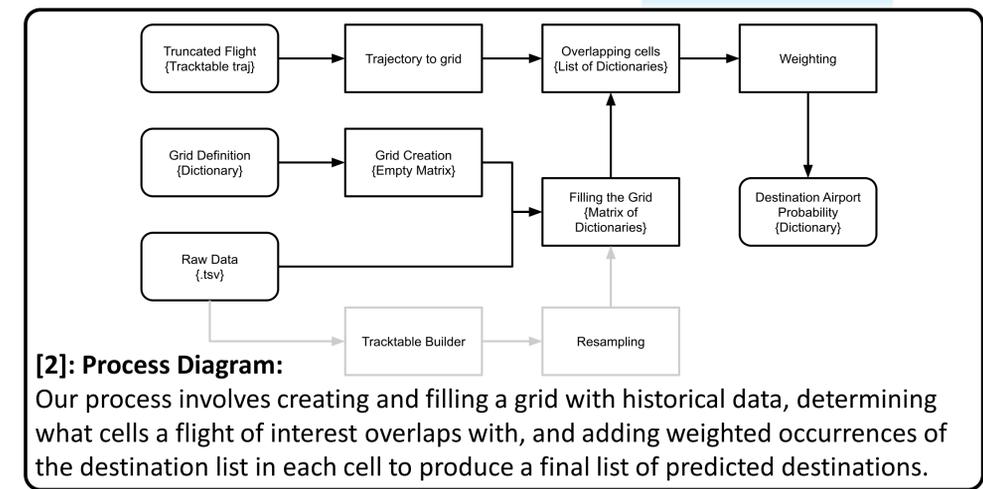
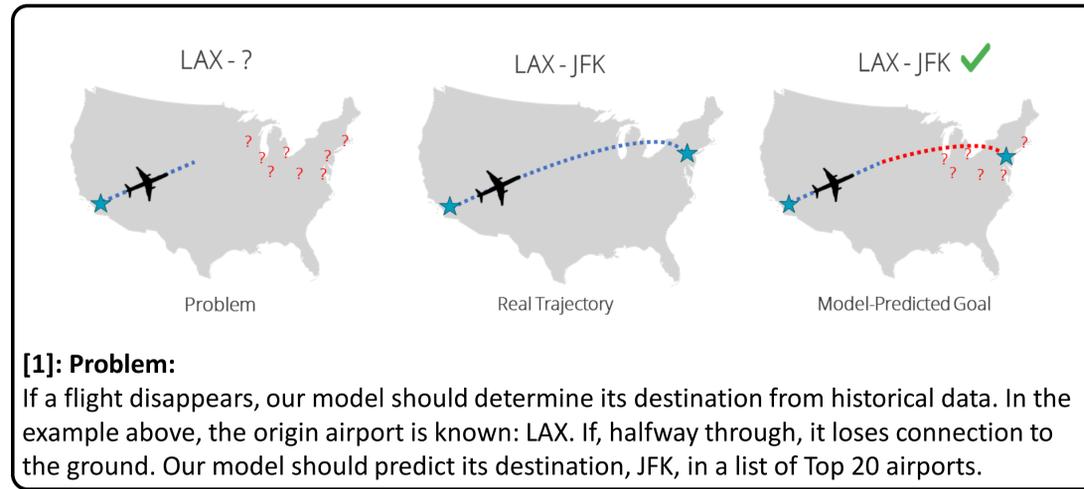
Motivation:

Predicting a flight's destination is an important challenge in motion analysis.

Methodology:

Picture historical flights with paint cans, filling buckets with its destination's color along its course. By comparing the colors of a flight of interest's buckets, we can predict its destination. (See 3)

Tools and Resources used: Tracktable (trajectories), Anvil (Large Data Processing), Python



Conclusion

Conclusion:

Our forecasting accuracy for identifying the top airport stands at 31% and Top 20 Leading Airports it is 75%. Major US airports are so dominant in air traffic that randomly picking from the top airports often lands you within the Top 20 predictions.

Future Work:

What makes flights to smaller airports different from those to larger ones? How can we predict their destinations?

Acknowledgements:

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References:

Tracktable and Python Documentation