

The paper titled "Predicting Time to Pushback of Flights in U.S. Airports" by Daniil Filienko, Yudong Lin, Kyler Robison, Trevor Tomlin, and Martine De Cock, presented at the 29th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, focuses on predicting the pushback time of flights². The pushback time refers to the moment when an aircraft is pushed backwards, away from its parking position at the gate². Accurate predictions of pushback time can yield more accurate predictions of flight takeoff time².

The authors propose a gradient boosting decision tree model for pushback time prediction, trained on a rich feature set encompassing data about weather, airport activity, airline, and aircraft characteristics². The model was designed and trained in response to the 2023 "Pushback to the Future" competition hosted by NASA².

In evaluating their approach on a large dataset with data from 10 U.S. airports, they found that training one local model for each airport is more memory efficient, while yielding a mean absolute error at par with a global model trained over the data of all airports combined². Their approach was among the winners of the 2023 "Pushback to the Future" competition².

Source: Conversation with Copilot, 5/24/2024

(1) Predicting Time to Pushback of Flights in U.S. Airports - kdd.org.

<https://www.kdd.org/kdd2023/wp-content/uploads/2023/08/filienko2023predicting.pdf>.

(2) KDD '23: Proceedings of the 29th ACM SIGKDD Conference on Knowledge

<https://www.kdd.org/kdd2023/wp-content/uploads/2023/08/toc.html>.

(3) KDD 2023 | Long Beach, CA, USA - KDD 2023.

<https://www.kdd.org/kdd2023/index.html>.

(4) undefined. <https://doi.org/XXXXXXX.XXXXXXX>.