

Results indicate that decisions to cancel flights are taken earlier, leaving more time to inform and re-route passengers. Decisions to issues fuel advices are taken later and are more targeted to short haul or long haul flights arriving within a specific timeframe.

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REFERENCES

- [1] Mijatovic, D., et al. "Research of the Relation between the Hourly Inbound Capacity at Schiphol Airport and the Number of KLM Transfer Passengers at Risk of Loosing their Connection.", 6th Eurontrol Innovative Research Workshop & Exhibition, 2007.
- [2] Anon., Integrated Aeronautical Information Package, Air Traffic Control the Netherlands, www.ais-netherlands.nl, retrieved September 2016
- [3] Hesselink, H.H., Nibourg, J.M., "Probabilistic 2-Day Forecast of Runway Use", National Aerospace Laboratory. NLR-TP-2011-287. 2011.
- [4] Ramanujam, V., and Balakrishnan, H., "Estimation of maximum-likelihood discrete-choice models of the runway configuration selection process," in American Control Conference, 2011.
- [5] Houston, S., Murphy, D., "Predicting runway configurations at airports," in Transportation Research Board (TRB) Annual Meeting, 2012, paper number 12-3682.
- [6] Mitchell, T., *Machine Learning*, McGraw-Hill, 1997.
- [7] Greene, W. H., *Econometric Analysis*, 7th Edition, Boston: Pearson Education. pp. 803–806. 2012
- [8] Hall M., Eibe F., Holmes G., Pfahringer B., Reutemann P., Witten I.H., *The WEKA Data Mining Software: An Update*; SIGKDD Explorations, Volume 11, Issue 1. 2009
- [9] Prajapati V., *Big Data Analytics with R and Hadoop*, PACKT, 2013
- [10] KDC - LVP Project team, *Improved Low visibility and Ceiling Forecasts at Schiphol Airport*, Final report, part 1, July 2008.