AIRLINE DATA ANALYTICS FOR AVIATION INDUSTRY – LITERATURE SURVEY					
SNO	**TITLE**	**JOURNAL**	**AUTHOR**	**YEAR**	**ACHIEVEMENTS**
1	**Airline flight schedule planning under competition**	Elsevier	Abdelghany A, Abdelghany K, Azadian F	2017	This paper presents a modeling framework for airline flight schedule planning under competition. The framework generates an operational flight timetable that maximizes revenue, while ensuring efficient utilization of resources (e.g. aircraft and crew) It explicitly considers passenger demand shift due to the network-level competition with other airlines. The performance of the framework is evaluated through several experiments to develop the schedule for a major U.S. airline.
2	**Predictive Maintenance and Performance Optimisation in Aircrafts using Data Analytics**	IEEE	Shakthi Weerasinghe, Supunmali Ahangama	2018	Airline industry has provided a significantly conventional, faster and reliable mode of transportation for passengers and freight over the decades. The study critically reviews the techniques and tools, infrastructure and general application architecture for discussing the applicability of data analytics in general aviation. Data analytics can be used to predict maintenance and optimize the performance of aircrafts.
3	**Multi-Task Local-Global Graph Network for Flight Delay Prediction**	IEEE	Tianyi Wang, Shu-Ching Chen	2022	In this paper, Deep learning framework based on graph convolutional networks and multi-task learning is proposed for flight delay prediction. The proposed model is evaluated on a large-scale public flight record dataset against several state-of-the-art methods. The experimental results demonstrate that our model can outperform all baseline methods in predicting short to medium-term flight delays.
4	**An aggregate stochastic programming model for air traffic flow management**	Elsevier	Andreatta G, Dell'Olmo P, Lulli G	2011	In this paper, we present an aggregate mathematical model for air traffic flow management (ATFM), a problem of great concern both in Europe and in the United States. The model explicitly incorporates uncertainty in the airport capacities; it also considers the trade-off between airport arrivals and departures. The level of aggregation proposed for the mathematical model it allows us to solve realistic size instances with a commercial solver on a PC.
5	**Cross-platform**	IEEE	Tulinda Larsen	2013	masFlight's hybrid architecture, consolidating secure data feeds in

	aviation analytics using big-data integration methods				on-premises server installations and feeding structured data into the cloud for distribution, addresses the unique format, security and scale requirements of the industry. The method is well suited for airline performance review, competitive benchmarking, airport operations and schedule design, and has demonstrated value in addressing real-world problems.
6	**Impact of the COVID-19 Pandemic on the Indian Domestic Aviation Industry**	IEEE	Preet Kaur Sidhu, Rachit Shukla	2021	This paper attempts to draw a comparison between the nature of the effects of the previous global crises and the COVID-19 pandemic on the aviation industry. The worst-hit time for the Indian airlines was March 2020 - April 2020 when a nationwide lockdown and ban on domestic flights was imposed. It was observed that parameters like passenger load factor were significantly affected. The financial impact of COVID-19 on the aviation industry is unprecedented and deeper rooted than previous outbreaks.
7	**Equitable and efficient coordination in traffic flow management**	Informs	Barnhart C, Bertsimas D, Caramanis C, Fearing D	2012	When air traffic demand exceeds capacity, the FAA implements traffic flow management programs. These programs maintain a first-scheduled, first-served invariant, which is the accepted standard of fairness within the industry. Coordinating conflicting programs requires a careful balance between equity and efficiency. Our results suggest that this approach could lead to system-wide savings on the order of $25 to $50 million per year.