EXHIBIT F

UTC Project Information	
Project Title	Improving Air Mobility in Emergency Situations
University	Embry-Riddle Aeronautical University
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Funding Source(s) and Amounts Provided (by each agency or organization)	Federal Funds: $220,000; Embry-Riddle Aeronautical University: $110,000
Total Project Cost	$330,000
Agency ID or Contract Number	69A3551747125
Start and End Dates	October 1, 2021-July 31, 2022
Brief Description of Research Project	Emergency situations in aviation pose serious risks to life and result in huge negative impacts on air mobility, causing a significant economic and reputation loss to airlines and airports. However, the decisions to deal with emergencies are usually made by flight dispatchers according to their experience, and they merely consider local-view optimization. Therefore, there is an urgent need to design a decision-making assistant system to alleviate the negative impact of perturbations on aviation air mobility in the global-view perspective. In this project, we will develop a framework based on machine learning that captures the patterns of emergency situations and optimizes the operation schedules quickly and accurately for maximum air mobility efficiency at both micro-level and macro-level. We will utilize multi-source data and leverage deep learning models to predict the consequence of emergency events considering the spatial-temporal characteristics of the events. Based on a prediction model, we will optimize air mobility output by adopting a deep multi-agent reinforcement learning model. Our goal is to provide pre-alert and decision-aid system for passengers and airport staff when emergency events occur, and to adjust the original schedule for quick recovery of disrupted air mobility.
Describe Implementation of	In this project, we will develop a framework based on

Research Outcomes (or why Not implemented) Place Any Photos Here	machine learning that captures the patterns of emergency situations and optimizes the operation schedules quickly and accurately for maximum air mobility efficiency at both micro-level and macro-level.
Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links • Reports • Project Website	https://erau.edu/research/projects?p=improving-air-mobility-in-emergency-situations

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