SRN: PES1PG22CS028

The article describes APAVs or eVTOLs, which are aircraft that use electric propulsion rotors to take off and land vertically like helicopters. They are designed to provide on-demand flying convenience and are not operated by pilots. Several businesses have invested in the concept of APAVs, and studies suggest that they can run effectively without requiring major adjustments to the current infrastructure. The benefits of using eVTOLs include producing less pollution and less noise, which is crucial in metropolitan areas. The problem statement highlights the safety concerns associated with self-driving vehicles, which must scan their surroundings to make decisions using perception and decision-making technologies.

The task involves predicting the best flight pathways and energy consumption of APAVs based on factors such as payload weight, weather, flight lengths, and battery capacity. The model's performance is measured based on securely and effectively transporting passengers with the least energy consumption, as well as reacting to changing environmental factors and unforeseen circumstances. The training data for the APAV includes weather patterns, sensor readings, and photographs, as well as air traffic reports, flying route limitations, altitude restrictions, and distance caps. A reinforcement learning method is suggested for the learning system, using supervised learning and reinforcement learning techniques, with training data including various flying scenarios, including regular and emergency situations.

The summary states that the task involves predicting the best flight pathways and energy consumption of APAVs based on several factors, with performance measured based on secure and efficient passenger transportation with minimal energy consumption. The model's training data includes weather patterns, sensor readings, air traffic reports, and other information. The learning system suggested is reinforcement learning, with training data including various scenarios, regular and emergency, using supervised and reinforcement learning techniques.

Muneeb Ahmed Khan
05/04/23