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A FEASIBILITY ASSESSMENT FOR A LOW-COST FLIGHT AND SPACE SIMULATOR

Abstract

The purpose of this work is to give a feasibility analysis of a low-cost flight and space simulator. The study's goal is to investigate the feasibility of creating a simulator that gives realistic flying and space experiences at a low cost. The research examines the available literature on aviation and space simulators and finds the important cost drivers. The study then presents a low-cost simulator architecture based on commercially available hardware and open-source software. The concept incorporates a cockpit that simulates real-world aircraft controls and a virtual reality visor that gives an immersive space experience, Customizability: A low-cost simulator may be quickly tailored to meet individual demands or specifications. These can contain numerous aircraft or spaceship types, settings, and levels of difficulty. And it shows that A low-cost simulator may be utilized in educational settings to teach people about aviation or space exploration. It may also be utilized to give hands-on training for anyone interested in working in these industries. The article also goes through the simulator's implementation, which includes software development and hardware integration. The feasibility study's findings indicate that a low-cost flight and space simulator can be built utilizing commercially available hardware and open-source software. The simulator is substantially less expensive than previous simulators, making it more accessible to a larger audience. The report continues by exploring the simulator's possible uses, such as its usage in aviation and space education, training, and entertainment.