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Author: Mr. Solomon Appekey
United Kingdom

Ms. Jemimah Kwakuyi
Xavier Space Solutions, Ghana
Mr. Daniel Asante
Space Generation Advisory Council (SGAC), Ghana
Mr. Jake Kwaayisi Yawson
Space Generation Advisory Council (SGAC), Ghana
Mr. Eric Obeng
Xavier Space Solutions, Ghana
Mr. Selorm Appekey
Xavier Space Solutions, Ghana
Mr. Kingsley Ahenkora-Duodu
University of Sheffield, United Kingdom
Mr. Kwame Amoako
Xavier Space Solutions, Ghana

NYARKOA CANSAT MODULE: A COST-EFFECTIVE APPROACH TO SIMULATING SPACE MISSIONS

Abstract

This paper delineates the methodology utilized in crafting an experimental satellite that showcases a pragmatic approach to emulate real-world space missions. Our findings affirm that it is feasible to construct experimental satellites using readily available components, providing an easier, cost-effective, and sustainable means of simulating actual space missions. The implemented satellite seamlessly integrates crucial elements, encompassing flight software, hardware components like the microcontroller, payload systems, communication modules, ejector modules, GPS, and power systems. This research offers a compelling starting point for launching space projects and programs. Furthermore, the results underscore the pivotal role of experimental satellites as a technologically robust and economically viable entry point for embarking on space initiatives with limited budgets.

Keywords: Experimental Satellites, CanSat, KiCad, Payload System, Nyarkoa