World Academy of Science, Engineering and Technology
International Journal of Mathematical and Computational Sciences
Vol:14, No:12, 2020

Development of Real Time System for Human Detection and Localization from Unmanned Aerial Vehicle Using Optical and Thermal Sensor and Visualization on Geographic Information Systems Platform

Authors : Nemi Bhattarai

Abstract : In recent years, there has been a rapid increase in the use of Unmanned Aerial Vehicle (UAVs) in search and rescue (SAR) operations, disaster management, and many more areas where information about the location of human beings are important. This research will primarily focus on the use of optical and thermal camera via UAV platform in real-time detection, localization, and visualization of human beings on GIS. This research will be beneficial in disaster management search of lost humans in wilderness or difficult terrain, detecting abnormal human behaviors in border or security tight areas, studying distribution of people at night, counting people density in crowd, manage people flow during evacuation, planning provisions in areas with high human density and many more.

Keywords : UAV, human detection, real-time, localization, visualization, haar-like, GIS, thermal sensor
Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development
Conference Location : Chicago, United States
Conference Dates : December 12-13, 2020

Open Science Index, Mathematical and Computational Sciences Vol:14, No:12, 2020 publications.waset.org/abstracts/81472.pdf