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THE ACCURACY ASSESSTMENT OF PHOTOGRAMMETRY PRODUCT DERIVED FROM DJI ZENMUSE L1 IN MAPPING.

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SCHOOL OF GEOMATICS SCIENCE AND NATURAL RESOURCES
COLLEGE OF BUILT ENVIRONMENT
UNIVERSITI TEKNOLOGI MARA MALAYSIA

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DECLARATION

I declare that the work on this project/dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA (UiTM). This project/dissertation is original, and it is the result of my work, unless otherwise indicated or acknowledged as referenced work.

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ABSTRACT

LiDAR stands as a powerful method for acquiring the data essential in crafting topographic maps. LiDAR observations positioned at ground level can be distinguished from the initial point cloud, providing a detailed representation of the terrain. However, the accuracy of Light Detection and Ranging (LiDAR) can be hindered by several factors, including sensor resolution, instrument errors and limited laser penetration in dense vegetation. The aim of this study is to evaluate the accuracy of LiDAR data using the DJI Zenmuse L1 sensor for mapping purposes. The objectives include capturing images, producing orthophotos at different flying heights using the DJI Zenmuse L1 sensor, and analyzing the accuracy of the generated maps. The methodology involves conducting laser scans at the survey location and capturing two different sets of images over the same area to compare the accuracy of each image. The results of the study indicate that the DJI Zenmuse L1 sensor can achieve generate model and accuracy in topographic data. By assessing the sensor's performance under varying conditions and analyzing the resulting data, this study demonstrates the potential of the DJI Zenmuse L1 sensor in providing reliable and precise topographic information.

Keyword: LiDAR, Digital Surface Model (DSM), Digital Elevation Model (DEM), accuracy.

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