

## **ABSTRACT**

*Road Extraction is indispensable in today's modern era. Road extraction is one of the fundamental tasks in the field of remote sensing. It has various applications such as automatic road navigation, unmanned vehicles, urban planning, and geographic information updating. Manual road extraction from digital images, while having high accuracy, is time- and cost-intensive, especially when the images are very complex. In the extraction process with the OBIA method, two processes are carried out, namely the segmentation and classification processes. The solution that the author proposes to use in this research is Deep learning U-Net. In extracting this road, two datasets will be used, namely, the OBIA annotation dataset and the digitation annotation using the Deep learning U-Net model method because it will save more time and the results obtained will be more accurate because the resulting image is high-resolution.*

*Keywords: Extraction, OBIA, U-Net, Image*