

UNIVERSITI TEKNOLOGI MARA

**URBAN DEVELOPMENT SPATIAL
STRUCTURAL MODEL USING
GEOGRAPHICALLY WEIGHTED
REGRESSION (GWR).**

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ABSTRACT

The consequences of the interaction between various types of land use leads to urban development. Geographically Weighted Regression (GWR) is chosen in this field to serve as a tool to model land use changes pattern of rapid urbanization in the subject region. Overall of this study is to achieve the aim which is to determine the land use changes in the study area using three different software, namely, ArcGIS 9.3, GWR 4.0 and SAM v 4.0. This task is to produce land used map for two different years which is 2000 and 2010. Two study area is chosen, namely, Kuala Langat and Taiping in Malaysia which experienced rapid development. It is found that the SAM v 4.0 seems to map land used map with high accuracy using Adjusted R^2 indicators (98%). The validation process for SAM v 4.0 is carried out for year 2005. It is found that the accuracy achieved 91%. In this study the predicted land used change for the study area for the year 2015 and 2020 also documented.

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