

## Digital Reconstruction of Museum's Statue Using 3D Scanner for Cultural Preservation in Indonesia

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**Abstract :** The lack of information about museum's collection reduces the number of visits of museum. Museum's revitalization is an urgent activity to increase the number of visits. The research's roadmap is building a web-based application that visualizes museum in the virtual form including museum's statue reconstruction in the form of 3D. This paper describes implementation of three-dimensional model reconstruction method based on light-strip pattern on the museum statue using 3D scanner. Noise removal, alignment, meshing and refinement model's processes is implemented to get a better 3D object reconstruction. Model's texture derives from surface texture mapping between object's images with reconstructed 3D model. Accuracy test of dimension of the model is measured by calculating relative error of virtual model dimension compared against the original object. The result is realistic three-dimensional model textured with relative error around 4.3% to 5.8%.

**Keywords :** 3D reconstruction, light pattern structure, texture mapping, museum

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