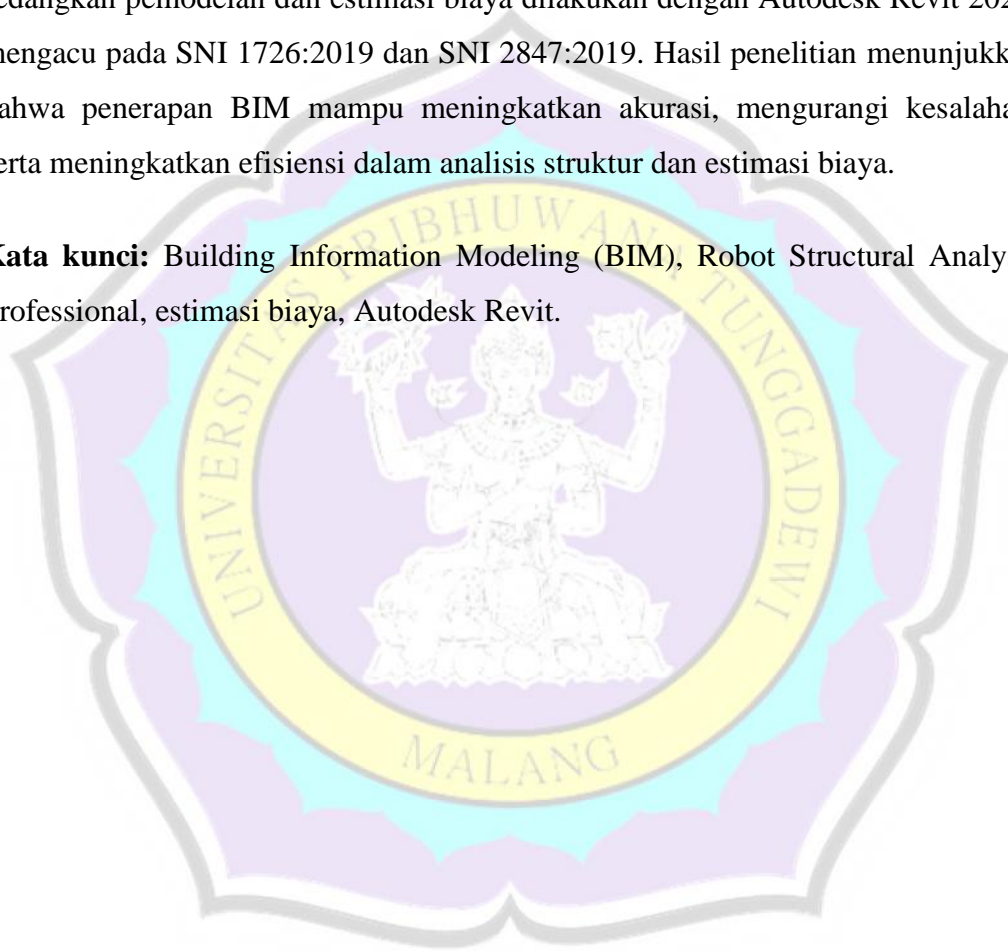


## ABSTRAK

Masjid sebagai bangunan publik harus direncanakan dengan struktur yang aman terhadap beban gravitasi dan gempa. Penelitian ini meninjau perencanaan struktur dan estimasi biaya Bangunan Masjid Al-Khoirot di Singosari dengan menggunakan metode *Building Information Modeling* (BIM). Analisis struktur dilakukan menggunakan Autodesk Robot Structural Analysis Professional 2023, sedangkan pemodelan dan estimasi biaya dilakukan dengan Autodesk Revit 2023, mengacu pada SNI 1726:2019 dan SNI 2847:2019. Hasil penelitian menunjukkan bahwa penerapan BIM mampu meningkatkan akurasi, mengurangi kesalahan, serta meningkatkan efisiensi dalam analisis struktur dan estimasi biaya.

**Kata kunci:** Building Information Modeling (BIM), Robot Structural Analysis Professional, estimasi biaya, Autodesk Revit.



## **ABSTRACT**

*Mosques as public buildings must be designed with structures that are safe against gravity and seismic loads. This study reviews the structural design and cost estimation of the Al-Khoirot Mosque Building in Singosari using the Building Information Modeling (BIM) method. Structural analysis was carried out using Autodesk Robot Structural Analysis Professional 2023, while modeling and cost estimation were performed using Autodesk Revit 2023, referring to SNI 1726:2019 and SNI 2847:2019. The results indicate that the application of BIM can improve accuracy, reduce errors, and increase efficiency in structural analysis and cost estimation.*

**Keywords** : *Building Information Modeling (BIM), Robot Structural Analysis Professional, cost estimation, Autodesk Revit.*

