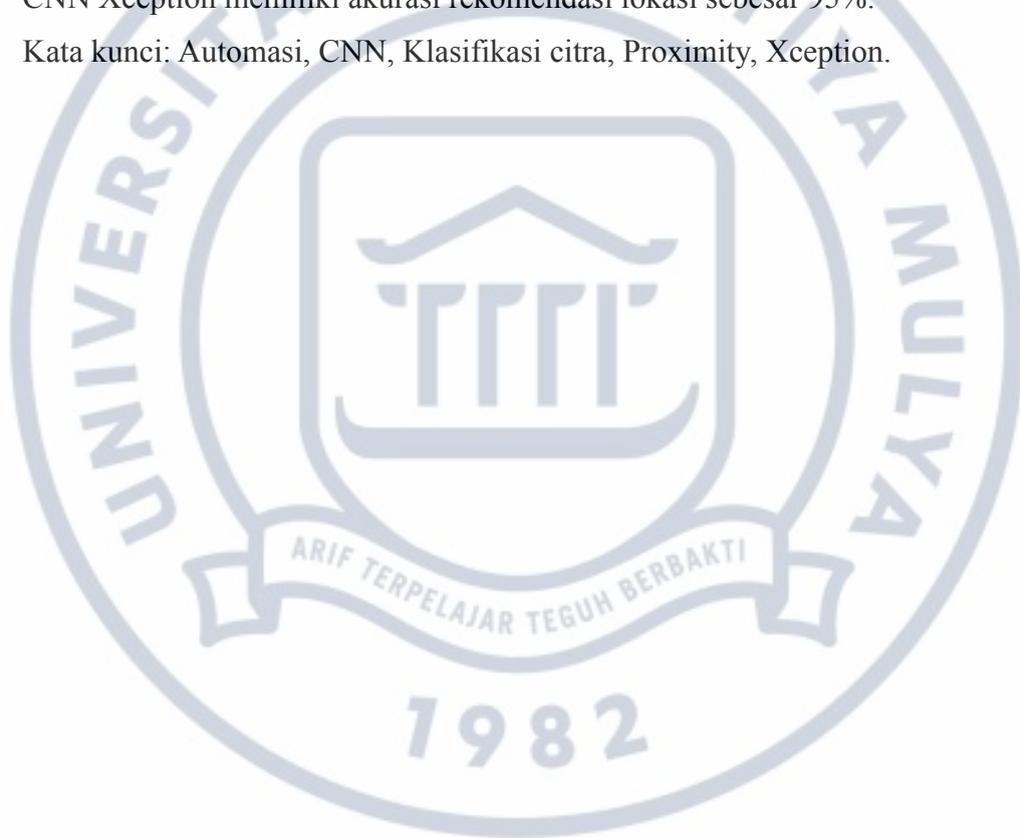# ABSTRAK

Penelitian ini bertujuan meningkatkan akurasi dalam pemberian rekomendasi nama lokasi secara otomatis melalui aplikasi Beats di *Head Office* PT. A dengan memberikan jarak *proximity* dan model klasifikasi citra. Dalam memilih model klasifikasi citra yang akan digunakan, dilakukan perbandingan antara dua metode image classification (CNN) untuk klasifikasi citra yakni arsitektur CNN biasa dan Xception *transfer learning*. Penelitian dilakukan secara kuantitatif dengan menggunakan data pelaporan *hazard* sejumlah 147 sampel, data *boundary* Head Office PT. A, foto area luar,dan data hasil pemetaan. Hasil penelitian menunjukan bahwa dengan menggunakan jarak *proximity* 45 meter didapatkan akurasi sebesar 88% sampel benar memberikan rekomendasi salah satu nama lokasi. Selain itu dengan menggunakan klasifikasi citra, arsitektur Xception *transfer learning* memiliki akurasi yang lebih tinggi dibanding arsitektur CNN biasa. Arsitektur CNN Xception memiliki akurasi rekomendasi lokasi sebesar 95%.

Kata kunci: Automasi, CNN, Klasifikasi citra, Proximity, Xception.

ABSTRACT

This study aims to increase accuracy in providing location name recommendations automatically through the Beats application at the Head Office of PT. A by using proximity and image classification models. In selecting the image classification model to be used, a comparison is made between two image classification (CNN) methods for image classification, namely the conventional CNN architecture and Xception transfer learning. The research was conducted quantitatively by using hazard reporting data of 147 samples, PT. A Head Office boundary data, photos of the outside area, and mapping data. The results showed that by using a 45 meters proximity distance, an accuracy of 88% of the sample was correct in providing a recommendation for one of the location names. In addition, by using image classification, the Xception transfer learning architecture has a higher accuracy than the usual CNN architecture. CNN Xception architecture has a location recommendation accuracy of 95%.

Keywords: Automation, CNN, Image classification, Proximity, Xception.