

**UNIVERSITI TEKNOLOGI MARA**

**AUTOMATED MUSIC CHORD RECOGNITION  
SYSTEM USING CONVOLUTIONAL NEURAL  
NETWORK(CNN)**

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## **ABSTRACT**

This project proposes creating an Automated Music Chord Recognition (ACR) system that uses Convolutional Neural Networks (CNNs) to improve the accuracy and efficiency of identifying and transcribing musical chords. Music, which is a vital part of human existence and performs a variety of functions from entertainment to education, presents chord identification issues due to complicated strumming patterns and large-vocabulary datasets with overlapping notes, harmonic interference, and dynamic variations in pitch and loudness. To overcome these issues, the study uses CNNs to extract features and enhance chord identification performance. The main objectives include analysing existing chord recognition algorithms, creating a prototype for real-time chord identification, and testing its performance with music recordings. Anticipated developments offer major applications in music education, production, and performance, with benefits for educators, students, producers, composers, and performers. Finally, the aim of this project is to improve music information retrieval by developing an accurate, efficient, and user-friendly chord recognition prototype that will open up new possibilities for creative expression, education, and treatment.

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