**Abstract**

Artificial intelligence (AI) has a huge potential to improve the efficiency of clinical tasks. Nowadays, doctors are overwhelmed by typing records into computers using traditional keyboard and mouse and they usually spend more time on typewriting than diagnosing the patients. Voice recognition methods can help doctor reduce clerical work and improve the efficiency of Electronic Health Record (EHR). Together with Natural Language Processing (NLP) methods, it provides a feasible solution for doctors to fill in the EHR form and diagnose the patient simultaneously without distraction. Also, with deep learning methods as LSTM, it can reduce the probability of misdiagnose on account that LSTM can give a preliminary result based on symptom description. Therefore, it can improve the accuracy and efficiency of diagnose and avoid manual mistakes. However, there are no efficient automated filled EHR systems based on voice recognition to be used in the clinical field currently in China. This project aims to create an automated report generation system for doctors, which is capable of transcribing real time voice input or audio files into plain text and process and analysis the key information to fill in the EHR form. The challenge is to achieve high accuracy in voice recognition, key information extraction to minimize the manual inspections ~~and provide possible disease prediction~~s.

//preliminary work on the prediction – auto-diagnose

or simple and basic

// future work