Natural Language Processing in Medical Applications

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Recently, the number of people who are diagnosed as mental diseases is increasing. Efficient and objective diagnosis is important to start medical treatments in earlier stages. However, mental disease diagnosis is difficult to quantify criteria, because it is performed through conversations with patients, not by physical surveys. We aim to automate mental disease diagnosis in order to resolve these issues. We recorded conversations between psychologists and subjects to build our diagnosis speech corpus. Our subjects include healthy persons, people with mental diseases of depression, bipolar disorder, schizophrenia, anxiety and dementia. All of our subjects are diagnosed by doctors of psychiatry. Then we made accurate transcription manually, adding utterance time stamps, linguistic and non-linguistic annotations. Using our corpus, we performed feature analysis to find characteristics for each disease, classified the mental diseases. I introduce this work, in addition to our other medical NLP works

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