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# Categorization system of language speakers by utilizing fMRI data during language comprehension

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**Abstract:** Recently, functional brain imaging techniques such as fMRI have been used to measure brain activities during language comprehension. We plan to apply such fMRI data to assess second language proficiency. For the purpose, first of all, we tested whether we can categorize subjects fMRI data during word comprehension into the first and second language speakers by utilizing a machine learning method. By utilizing support vector machine, we could categorize fMRI data into the first and second language speakers in 100