Mitigating Linguistic Discrimination of LLMs in Assessing English Learners

- Dongwon Lee, College of Information Sciences and Technology
- ChanMin Kim, College of Education

Abstract: This collaborative project between Penn State (IST & Education) and University of Mississippi (Computer Science) proposes to investigate linguistic discrimination issues of LLMs and their impacts on the auto-assessment of the level of English learners. We hypothesize that automated writing assessments generated by LLMs favor standard English writing while neglecting other English dialects spoken by African American or Hispanic students in the US or by population in other English-speaking countries. Therefore, there is an urgent need to understand linguistic discrimination and limitations of LLMs in assessing student writings in English. With the support from this seed grant, therefore, we propose to design a framework that can systematically demonstrate and detect potential linguistic discrimination in LLM-generated assessments of student writings in English, and obtain preliminary results from experiments that will lead to larger proposals for external funding.