

Communal AI Prompting for Linguistic Tool Development: Co-Designing Elisheet with Baangi Speakers

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Digital tools for minoritized language documentation are often designed without substantial involvement from the speaker communities who ultimately use them. This paper presents a case study of *communal AI prompting* as a method for collaboratively developing linguistic tools with language assistants during fieldwork. During documentation work on Baangi, a critically endangered language spoken primarily by speakers aged 35 and above (Decker et al., 2021), and where only an interpreter from another Hausa variety was available, Baangi–Hausa bilingual assistants expressed the need to read elicitation prompts in Hausa, verify pronunciations through immediate playback, and revisit skipped items during recording. These requests motivated the development of *Elisheet*, a spreadsheet-based elicitation interface that displays prompts and records audio within the same environment while automatically organizing recordings and metadata. Using the generative model Google Gemini, the researcher and language assistants collaboratively formulated prompts to iteratively prototype features responding to these needs. The resulting workflow allowed speakers to actively shape the structure and functionality of the tool while ensuring that the collected data remained organized and manageable for later analysis. The paper reflects on this process of communal AI prompting, outlining practical strategies for using generative AI to rapidly prototype linguistic tools in collaboration with speaker communities, and exploring which AI tools are most appropriate for different stages of linguistic tool creation depending on the task. It argues that such approaches can support participatory tool development and produce documentation infrastructures that are better aligned with real fieldwork and teaching contexts for minoritized languages.

Keywords: language documentation, participatory design, generative AI, prompting, elicitation tools, endangered languages

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