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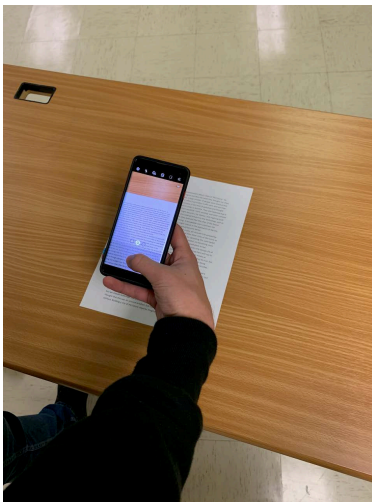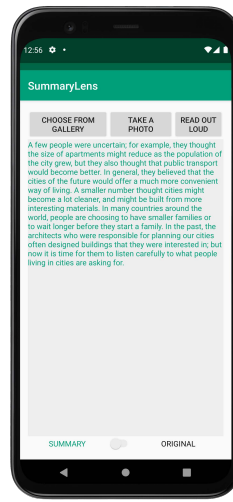
HCI ×AI

UNIVERSITÄT BAYREUTH

SummaryLens

An App for Exploring Interactive Text Summarization in Everyday Life

We present **SummaryLens**, a concept and prototype for a mobile tool that leverages automated text summarization to enables users to quickly scan and summarize physical text documents. We further combine this with a text-to-speech system to read out the summary on demand. With this concept, we propose and explore a concrete application case of bringing ongoing progress in AI and Natural Language Processing to a broad audience with interactive use cases in everyday life. Based on our implemented features, we describe a set of potential usage scenarios and benefits, including support for low-vision, low-literate and dyslexic users. A first usability study shows that the interactive use of automated text summarization in everyday life has noteworthy potential. We make the prototype available as an open-source project to facilitate further research on such tools.
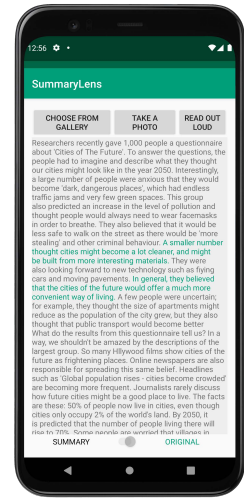
▶ **Scan Document**

The user can choose between either scanning a document using your device's camera or choosing an already scanned document from the gallery

▶ **Summarized Document**

The scanned document's text gets recognized and eventually summarized. This summary is initially being displayed to the user.

▶ **Highlighted Sentences**

The user can switch between the summary and the original of the chosen document. Sentences used in the summary are highlighted in the original text to support reader's comprehension

To gain first insights into users' experience and views with our concept and prototype, we conducted an exploratory user study with five students (mean age 22 years, range 20-28). We instructed them to try out the app, involving the text document, while thinking aloud. No further explanation of the UI was provided. We observed the following opportunities and challenges:

Opportunities

- Creating summaries on the go allows for faster document reading

- Summary facilitates comprehension of documents

Challenges

- Explainability: Users wondered if summary might omit vital information

- Demand for adjustable UI and summarisation settings (e.g. font size, reading speed, summary length, etc.)