

English: Abstract

"The Voice Revolution" argues that Voice User Interfaces (VUI) are essential infrastructure for bridging the digital divide, specifically for the 2.2 billion people globally with vision impairments. It traces the evolution of computing from typing code to simply speaking, highlighting how VUI enables "eyes-free" and "hands-free" interaction. The document details the technical process of converting speech to action via ASR and NLU and illustrates this with a practical voting application that allows blind users to cast ballots independently and secretly. While challenges like privacy and accent recognition remain, the future points toward "Agentic AI" partners rather than simple tools.

Kiswahili: Muhtasari

Wasilisho hili linaelezea "Mapinduzi ya Sauti" kama njia kuu ya kuwasaidia watu wenye ulemavu wa macho kutumia teknolojia. Teknolojia imebadilika kutoka kwa kubonyeza vitufe hadi kutumia sauti (VUI), jambo ambalo linaondoa hitaji la kuona skrini. Kwa kutumia mifumo ya kutambua sauti (ASR) na kuelewa lugha (NLU), teknolojia hii inawezesha vipofu kupiga kura kwa siri na uhuru bila msaada wa mtu mwingine. Ingawa kuna changamoto za lahaja na usalama wa data, lengo ni kuelekea teknolojia inayoweza "kuzungumza" na kutenda kama msaidizi kamili.

Kikuyu: Gũcookereria (Abstract)

Buku ñno ñraheana ũhoro wĩgĩĩ "Mũtugarũ wa Mĩgambo" (Voice Revolution) na ũrĩa ũrateithia kũniina mwanya wa kĩ-teknononjĩ, makĩria kũrĩ andũ arĩa matonaga. Ũkinyaniria ũyũ ũronania ũrĩa tũkoretwo tũkĩgarũrũka kuuma kũhũthĩra moko gũkinyĩria kũhũthĩra mĩgambo (VUI), ũndũ ũrĩa ũteithagia mũndũ kũhũthĩra simũ atekũmĩrora. Na njĩra ya kũhũthĩra ũũgĩ wa kũthikĩrĩria na gũtaũra mĩgambo, tekinononjĩ ñno nĩ ñhotithagia arĩa matonaga gũthura na hitho matekũteithio nĩ mũndũ ũngĩ. O na gũtuĩka kwĩna mathĩna ta ma ũgitĩri na mĩario ñtiganĩte, ũũgĩ ũyũ nĩguo kĩhumo kĩa matukũ marĩa maroka.