

SoniDash: Audio-Augmented Analytics for A/B Testing

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Abstract:

SoniDash (Sonification Dashboard) is a lightweight web dashboard under the product analytics domain that augments standard A/B testing charts with interactive data sonification. KPI streams (data) is mapped to audio parameters (sound) alongside an audio legend and text-to-speech for precise values. For example, value -> pitch, rate-of-change -> loudness, variant (A/B) -> timbre. The system will be developed centering the user in an HCI process, bettering work for analysts under a visual load. This will help them to detect anomalies faster and compare cross-variants better. Evaluation will use a small, task-based study comparing **visual-only** vs **visual+audio**, measuring time-to-insight, error rate, and perceived clarity (SUS + brief Likert items). Implementation will rely on Web Audio (Tone.js), a standard chart library (e.g., Vega-Lite/Chart.js), and CSV inputs. Expected outcomes include interaction patterns, mappings, and evaluation results, showing when and how this SoniDash will improve comprehension in everyday product analytics workflows.