

LiveVision: Real Time Object Recognition and Speech Synthesis using Machine Learning

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Abstract: *In the realm of education and accessibility, a significant gap exists for school-aged children as well as for visually impaired individuals, who often face challenges in accessing interactive and inclusive learning tools. Existing educational applications have yet to fully address the unique needs of these diverse user groups, particularly in the areas of real-time object recognition and speech synthesis. This paper presents LiveVision, an innovative solution designed to bridge these gaps. LiveVision integrates real-time object recognition with speech synthesis using Machine Learning to provide an engaging and accessible educational experience for children, while simultaneously offering a vital tool for enhancing the independence and learning of visually impaired individuals. By leveraging cutting-edge technologies, LiveVision empowers children with interactive learning opportunities, fosters a more inclusive environment, and promotes equal access to education for those with visual impairments. This research explores the design, development, and potential impact of LiveVision, aiming to break barriers, enhance learning outcomes, and create an inclusive educational landscape for all.*

Keywords: Machine Learning, LiveVision, Speech Synthesis, TensorFlow