

# A Comprehensive Survey on Deep Learning-Based Architectural Image Captioning for Visual Accessibility

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**Abstract:** *A challenging issue that is receiving more and more attention in the field of artificial intelligence is image captioning. Among other applications, it can be used for intelligent blind guidance, human-computer interaction, and effective picture retrieval. This article examines developments in deep learning-based image captioning techniques, such as the encoder-decoder structure, enhanced encoder and decoder techniques, and other enhancements. We also talk about potential avenues for further research.*

**Keywords:** Artificial Intelligence

