

Visipedia: a network of people, machines and data for harvesting and organizing visual knowledge

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Abstract

Visipedia is a network of people, machines and data that is designed to harvest and organize visual information and make it accessible to anyone anywhere. I will explore technical challenges arising from Visipedia and discuss their implications for computer vision, machine learning, human-machine systems and visual psychology. I will discuss two case studies: an automated field guide to the birds of the world and an automated system for cataloguing trees in urban environments. Key contributions include a method for characterizing the multidimensional wisdom of crowdworkers and a classification pipeline combining input from humans and machines. I will conclude by discussing several open issues encompassing algorithm development to community engagement.

Keywords

Visipedia, Organizing Visual Knowledge