

Current Status and Future Prospects of Deepfake Detection



Invited Speaker

Baoyuan Wu

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Biography

Baoyuan Wu is an Associate Professor of School of Artificial Intelligence, The Chinese University of Hong Kong, Shenzhen, Guangdong, 518172, P.R. China. His research interests are trustworthy and generative AI, as well as optimization. He has published 120+ top-tier conference and journal papers, including 10 TPAMI and 6 IJCV, and one paper was selected as the Best Paper Finalist of CVPR 2019. His Google Scholar citation is 15,000+. He is currently serving as a Senior Area Editor of IEEE TIFS, and has served as Area Chairs of CVPR/NeurIPS/ICLR/ICML/AAAI/ECCV for 20+ times. He was selected into the world's top 2% scientist list of 2021~2025, released by Stanford University. He was awarded the "2023 Young Researcher Award" of The Chinese University of Hong Kong, Shenzhen. He is IEEE Senior Member.

Abstract

We will first review the development history of deepfake detection technologies and propose a generational framework. From multiple perspectives, including generalization, interpretability, and evolvability, we will conduct an in-depth analysis and comparison of the technical characteristics of each generation of deepfake and detection methods, and summarize the structural challenges that existing detection technologies face when confronting advances in deepfake generation. Building on this, we will further discuss future trends in deepfake technologies, propose a feasible solution, and present preliminary exploratory results. Finally, if time permitted, I will also introduce our preliminary work on agent safety.