synthetic realities: how can digital forensics cope with generative artificial intelligence content explosion?

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Professor Anderson Rocha
Director, Artificial Intelligence Lab., Recod.ai
Institute of Computing
University of Campinas, São Paulo (Brazil)

Abstract

In this talk, we will discuss how our society is living in what is being referred to as Synthetic Realities. We will touch upon important technologies shaping these new realities such as ChatGPT, Midjourney, Dall-E2, StableDiffusion, Firefly and others. More importantly, we will discuss what kinds of telltales can be explored to expose such creations or forgeries, pinpoint the research challenges ahead and implications of such fakes to the society at large.

About the Speaker

Anderson Rocha is a full professor of Artificial Intelligence and Digital Forensics at the Institute of Computing, University of Campinas (Unicamp), Brazil. He is the Director of the Artificial Intelligence Lab., Recod.ai, and the Institute Director for the 2019-2023 term. He has actively worked as an editor of important international journals such as the IEEE Transactions on Information Forensics and Security (T.IFS), Elsevier Journal of Visual Communication and Image Representation (JVCI), and IEEE Signal Processing Letters (SPL), and the IEEE Security & Privacy Magazine. He is an elected affiliate of the Brazilian Academy of Sciences (ABC) and the Brazilian Academy of Forensic Sciences (ABC). He is a two-term elected member of the IEEE Information Forensics and Security Technical Committee (IFS-TC) and its chair for the 2019-2020 term. He is a Microsoft Research and a Google Research Faculty Fellow, important academic recognitions that Microsoft Research and Google bestowed on researchers, respectively. In addition, in 2016, he was awarded the Tan Chin Tuan (TCT) Fellowship, a recognition promoted by the Tan Chin Tuan Foundation in Singapore.