



How AI techniques boost 3D Reconstruction in Industry



Dr. Jingwei Huang

Research Scientist
2012 Laboratories of Huawei

🎤 Host: 王鹤 助理教授

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Abstract

3D reconstruction is a fundamental problem for industry digitization. While this topic is researched for decades, several core challenges remain unsolvable when applying 3D reconstruction to industrial applications. With recent development of AI algorithms, there are many new opportunities to push the technique forward to tackle these challenges. In this presentation, we aim to expose real-world challenges, discuss about how AI boosts our solutions, and propose potential directions for addressing these challenges. Specifically, we will introduce our solutions for Scan2CAD modeling and realistic appearance reconstruction.

Biography

Jingwei Huang is a research scientist and project leader at Riemann Lab, 2012 Laboratories of Huawei. Before that, he received a PhD in Computer Science (2020) from Stanford University, USA. His research interests lie at the interface of 3D computer vision, computer graphics and geometry processing. His passion is harnessing the power of modern deep learning and traditional geometry processing algorithms to automate 3D holistic reconstruction of the large-scale real environment.