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Talk



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3D awareness is good for your computer vision tasks

I will be mostly talking about three pieces of our works that inject 3D knowledge to 2D vision representations. The first one will focus on improving 2D representations for semantic correspondence matching by incorporating a coarse geometry information to them. The second part will focus on introducing 3D awareness to joint learning of multiple dense computer vision tasks including depth estimation, semantic segmentation and surface normal estimation. The last part of the talk will introduce a novel anomaly detection problem and solution that detects anomalies by comparing object instances in images to their corresponding 3D reference shapes.

Hakan Bilen is a reader (associate professor) in the School of Informatics at the University of Edinburgh and leading the Visual Computing research group since 2017. He completed his PhD in the VISICS group of KU Leuven and worked as a post-doc in the Visual Geometry Group at the University of Oxford. His core expertise is in computer vision and machine learning with a focus on weakly supervised learning, multi-task learning, and data-efficient learning techniques.

July 15h, 2024

starting at 4:00 PM

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