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Efficient Scene Understanding: Joint Tasks

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Computer vision community achieved significant leaps recently in a wide spectrum of visual tasks. Human precision has been surpassed in several vision tasks and many applications which were considered science fiction are becoming reality. Autonomous driving, among other applications, still faces several challenges to guarantee safe and reliable deployment in unstructured and crowded environments. Joint-task processing is considered a promising path to allow efficient and accurate holistic perception for autonomous agents. In this talk, we explore a prominent direction in the research which addresses detection and temporal tracking of scene objects jointly. Additionally, we present one of our recent works which aims at pushing forward the efficiency of such joint methods to real-time levels. Finally, we identify possible directions of future work that can further increase the accuracy of such tasks exploiting available sensing modalities.

BIO

Issa Mouawad is a 2nd year PhD Student at UniGe (MalGa group); his main research interests cover computer vision and machine learning applied in perception for autonomous agents. His recent works include obstacle detection and sensor fusion for autonomous surface vehicles and efficient joint detection and tracking for autonomous driving applications.