컴퓨터 비전 연구실 (Computer Vision Lab.)

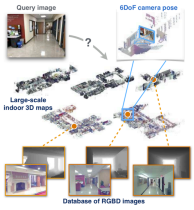


지도교수

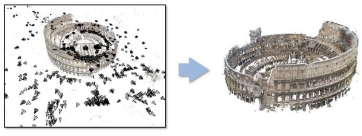
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연구분야: 컴퓨터 비전, 기계학습, 인공지능 등

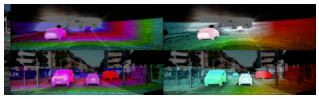
3D Computer Vision



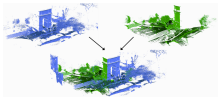
Visual Localization



SfM and Multi-View Stereo



Stereo/Optical Flow/Scene Flow



3D Registration



3D Object Detection/Segmentation

- ✓ 인공지능을 활용한 초정밀 3차원 복원 연구
- ✓ AR/VR을 위한 3차원 모델 분석 및 3차원 컴퓨터 비전 적용 연구

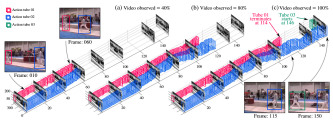
Visual (Image, Video) Understanding



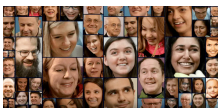
Panoptic Detection/Segmentation



Human Understanding



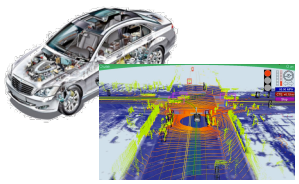
Video Understanding



Affective Computing

- ✓ 인공지능을 활용한 비정제 영상/동영상 분석 및 이해 연구 (예: 의미 분류, 검출, 분할 등)
- ✓ 인공지능을 활용한 사람의 행동 인지 및 감성 인지 연구

Multi-modal Learning





Audio-Visual Fusion



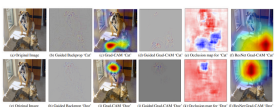
Multi-Sensor Fusion



Text-Visual Fusion, VQA, Dialog

- ✓ 다중 센서(예: 영상, 적외선, 라이더 등) 정보를 활용한 초정밀 시각 복원 및 이해 연구
- ✓ 다중 모달러티(예: 영상, 음성, 자연어 등) 정보를 융합한 상호 보완적인 솔루션 기술 연구

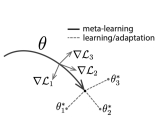
Deep Representation Learning



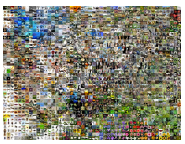
Explainable AI



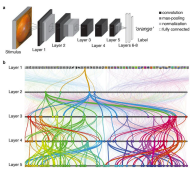
Disentangled Representations



Meta-Learning



Unsupervised Learning



Connectivity Analysis

- ✓ 강인하고 분별력 있는 인공지능 표현자 연구
- ✓ 기하 변형에 강인한 인공지능 표현자 연구
- ✓ 사람의 노력을 최소화하여 인공지능을 학습하는 기법 연구 (예: 메타학습, 강화학습 등)