



AIV Lab.

AI for Vision

단국대학교 소프트웨어학과
김보은

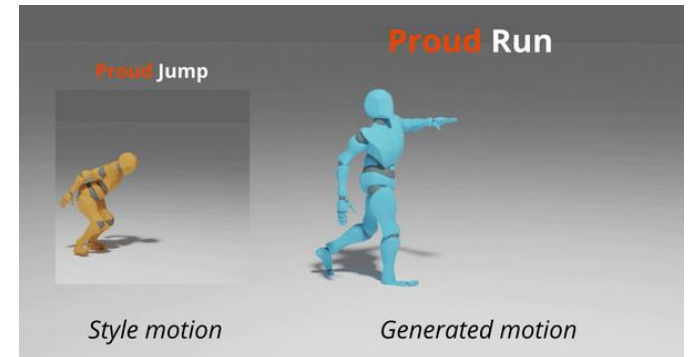
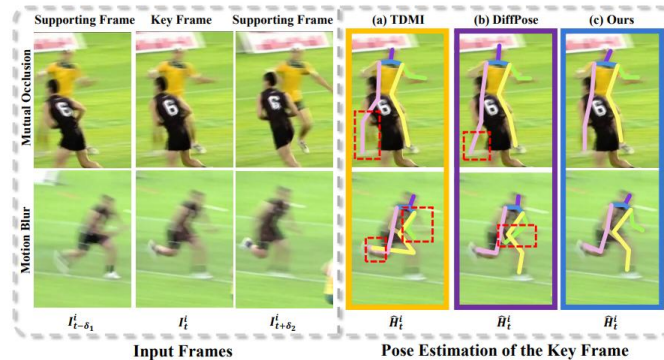
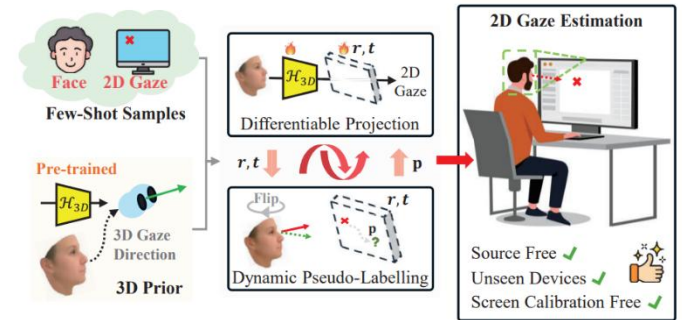
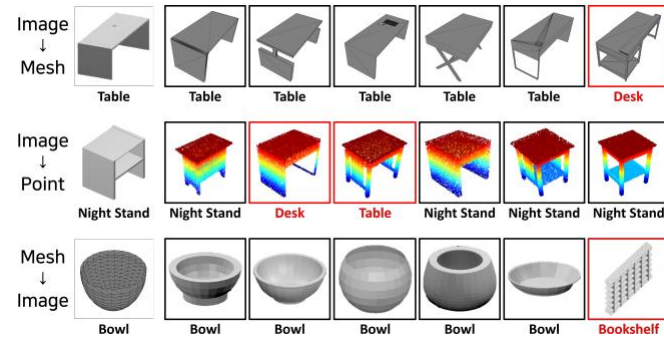
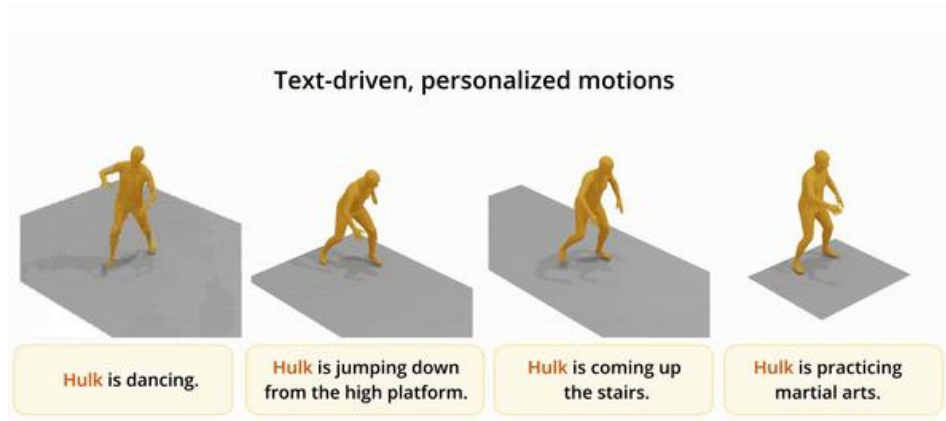
<https://aivlab.pages.dev/>



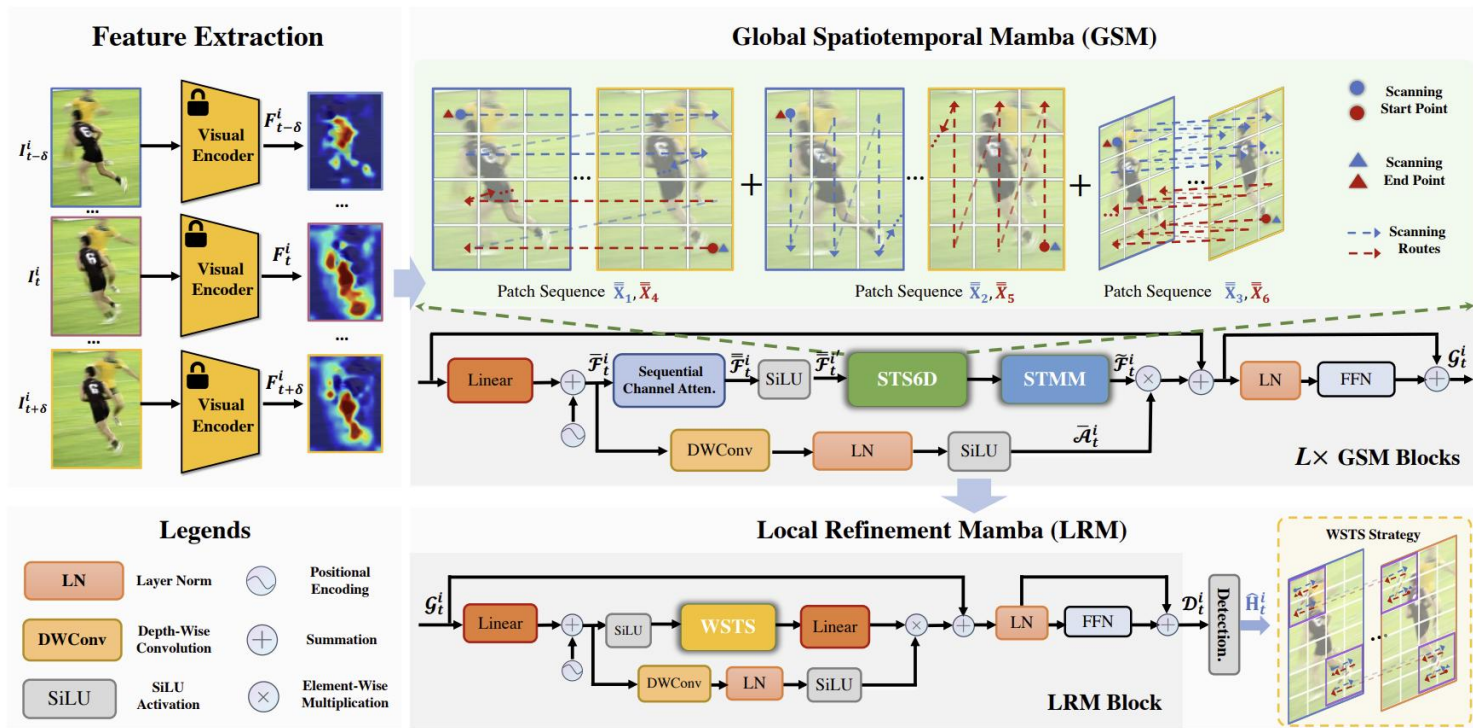
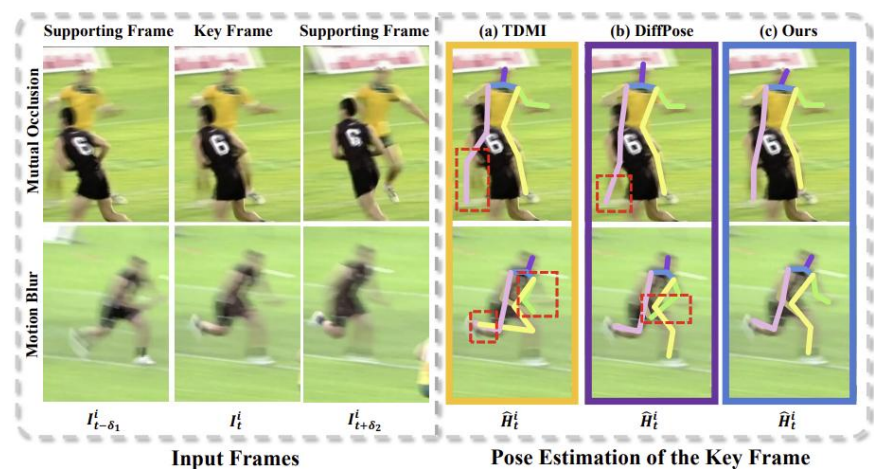
AIV Lab. 주요 연구 분야

■ 인공지능 / 컴퓨터 비전

- 휴먼 모션 모델링 | 멀티모달 AI | 3D 비전
- 3D 객체 및 환경 상호작용, 이미지/비디오 생성, 휴먼 포즈 인식, 액션 인식, 감정 인식, 시선 인식

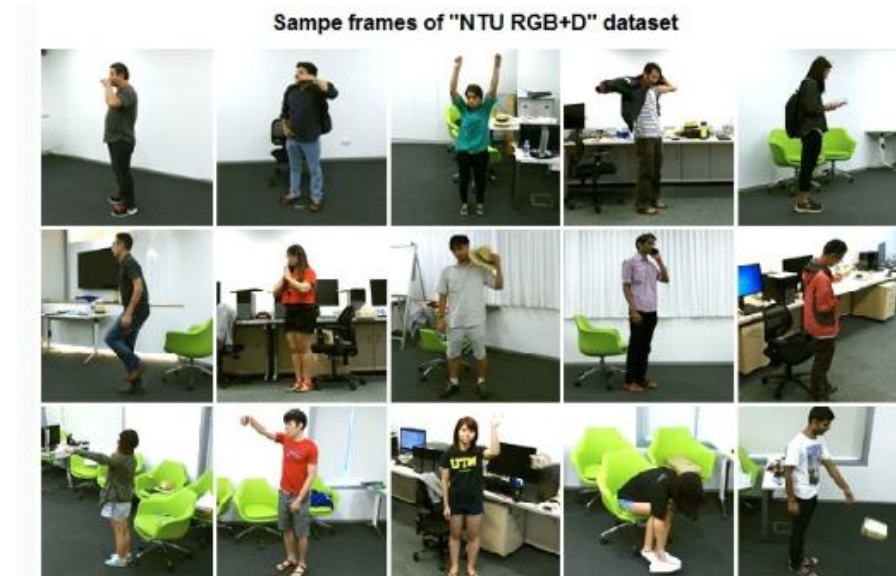
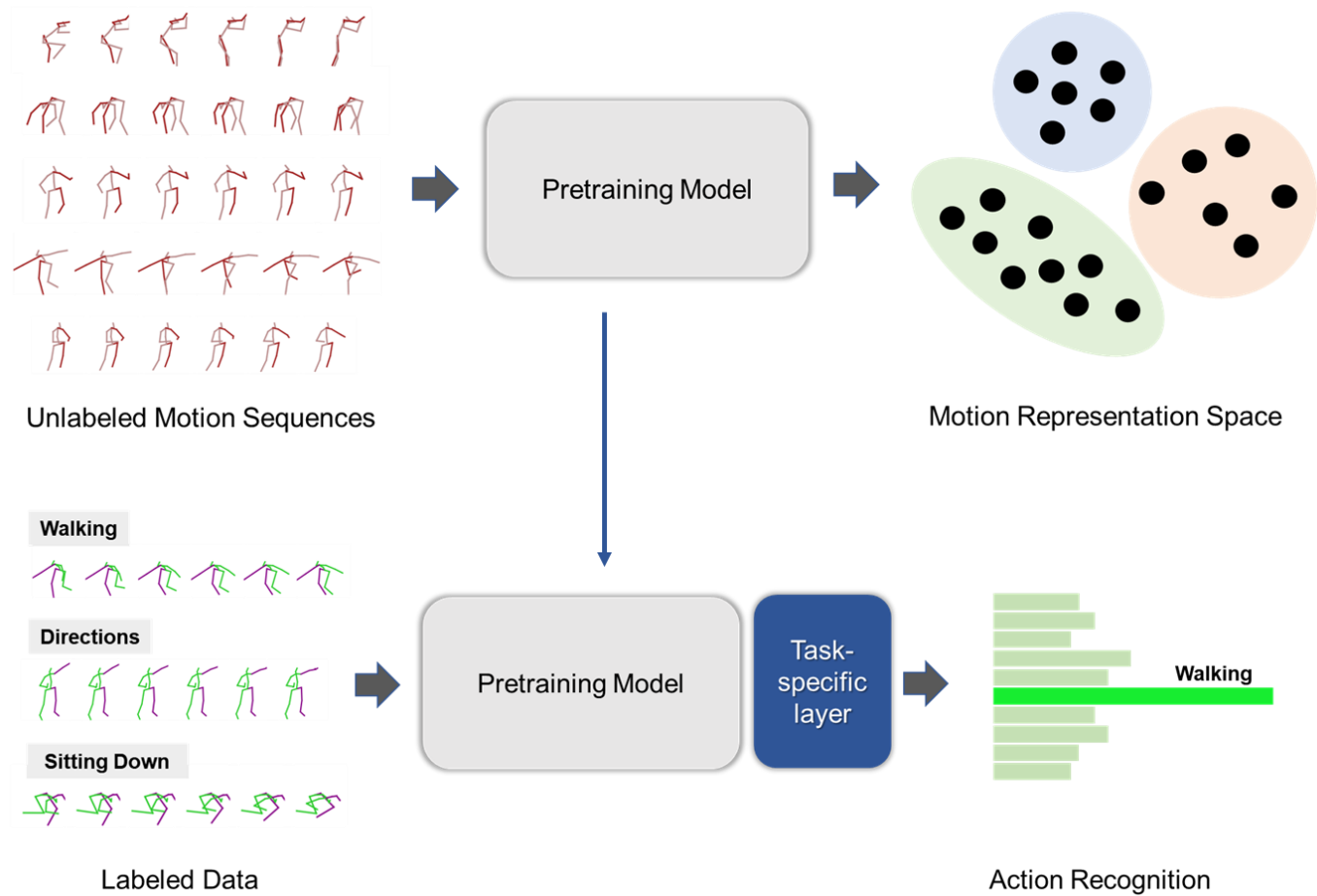


- 휴먼 포즈 인식 (ICCV 2025)



Human 관련 연구

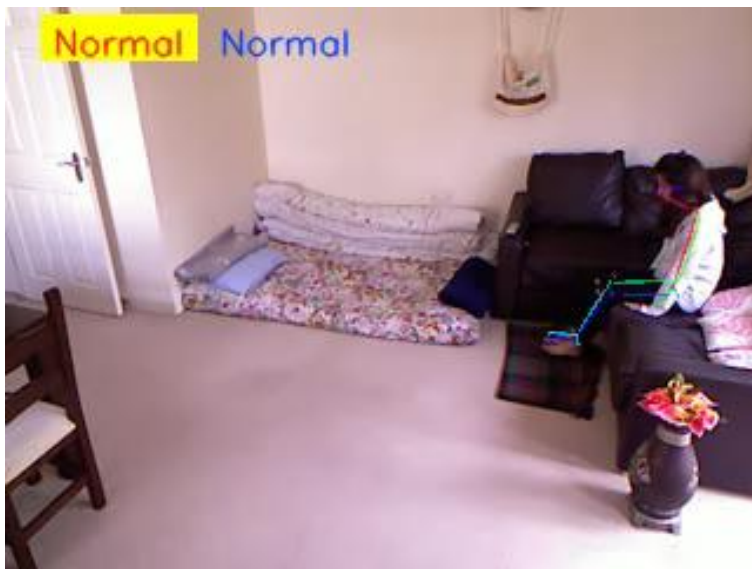
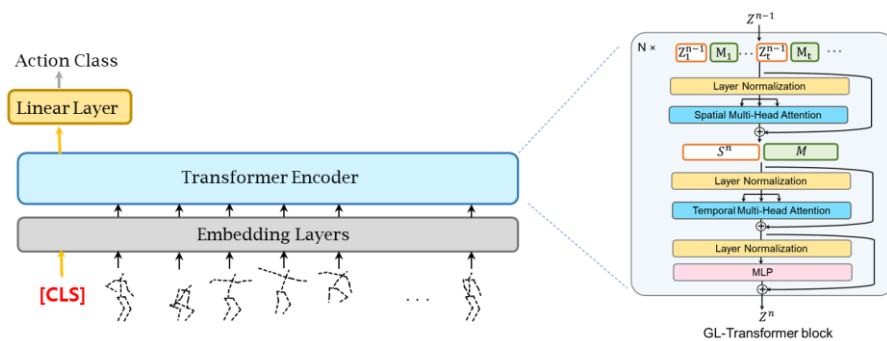
■ 비지도 행동 인식 (ECCV 2022)



Kim, B., Chang, H. J., Kim, J., & Choi, J. Y. Global-local motion transformer for unsupervised skeleton-based action learning. **ECCV, 2022.**

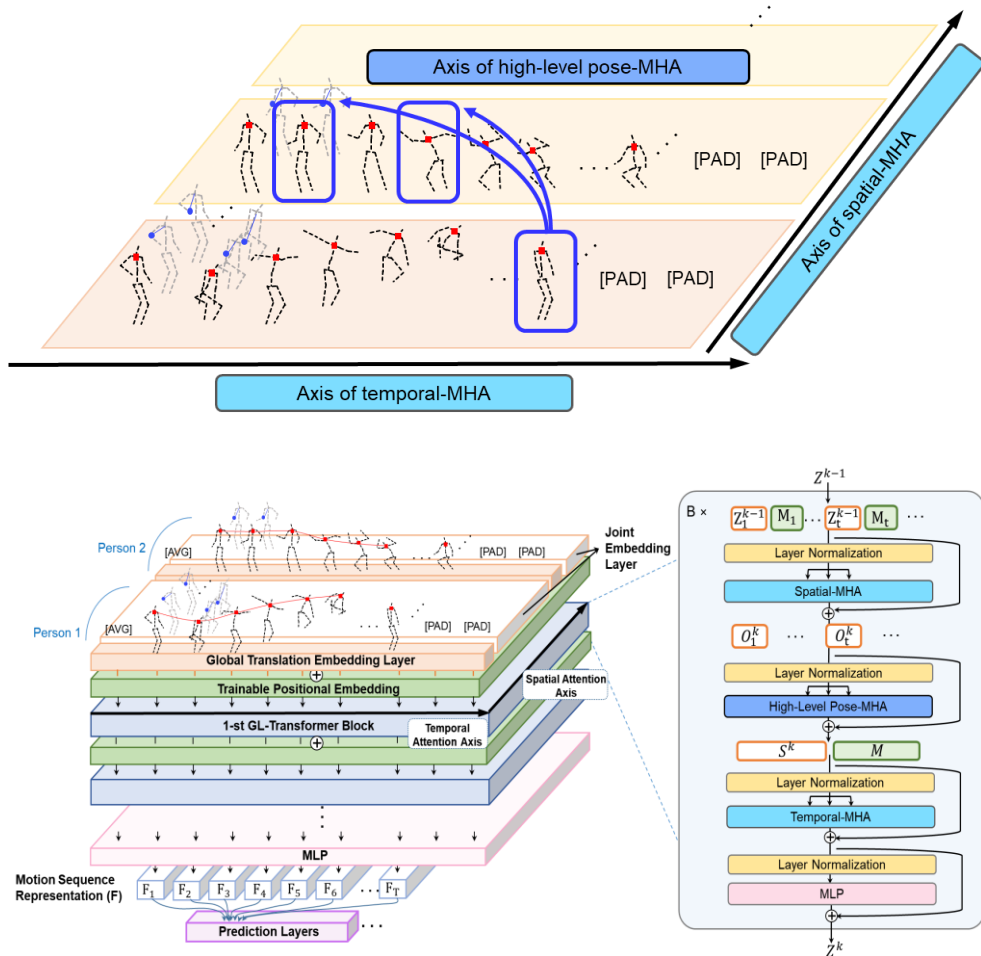
Human 관련 연구

- [적용] 작업장 내 이상 행동 (낙상) 탐지



Human 관련 연구

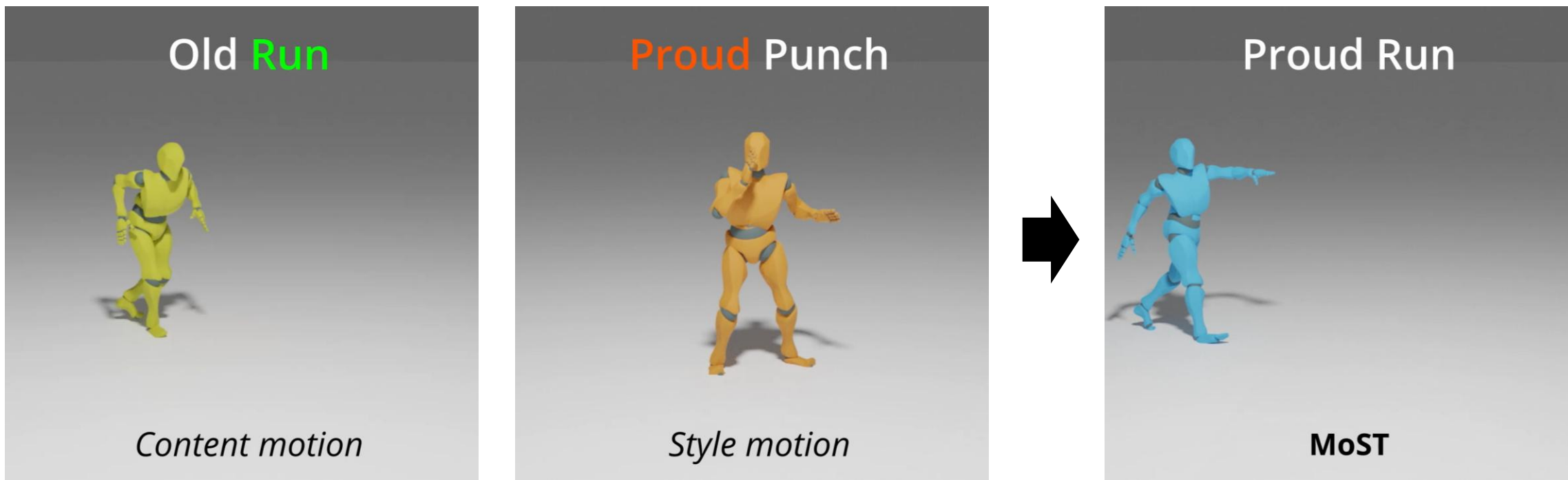
- 그룹 행동 인식 (Pattern Recognition)



Kim, B., Kim, J., Chang, H. J., & Oh, T. H. A Unified Framework for Unsupervised Action Learning via Global-to-Local Motion Transformer. **Pattern Recognition**, 2025.

Human 관련 연구

- 모션 스타일 전이 (CVPR 2024)



Kim, B., Kim, J., Chang, H. J., & Choi, J. Y. MoST: Motion Style Transformer between Diverse Action Contents. **CVPR, 2024.**

Human 관련 연구

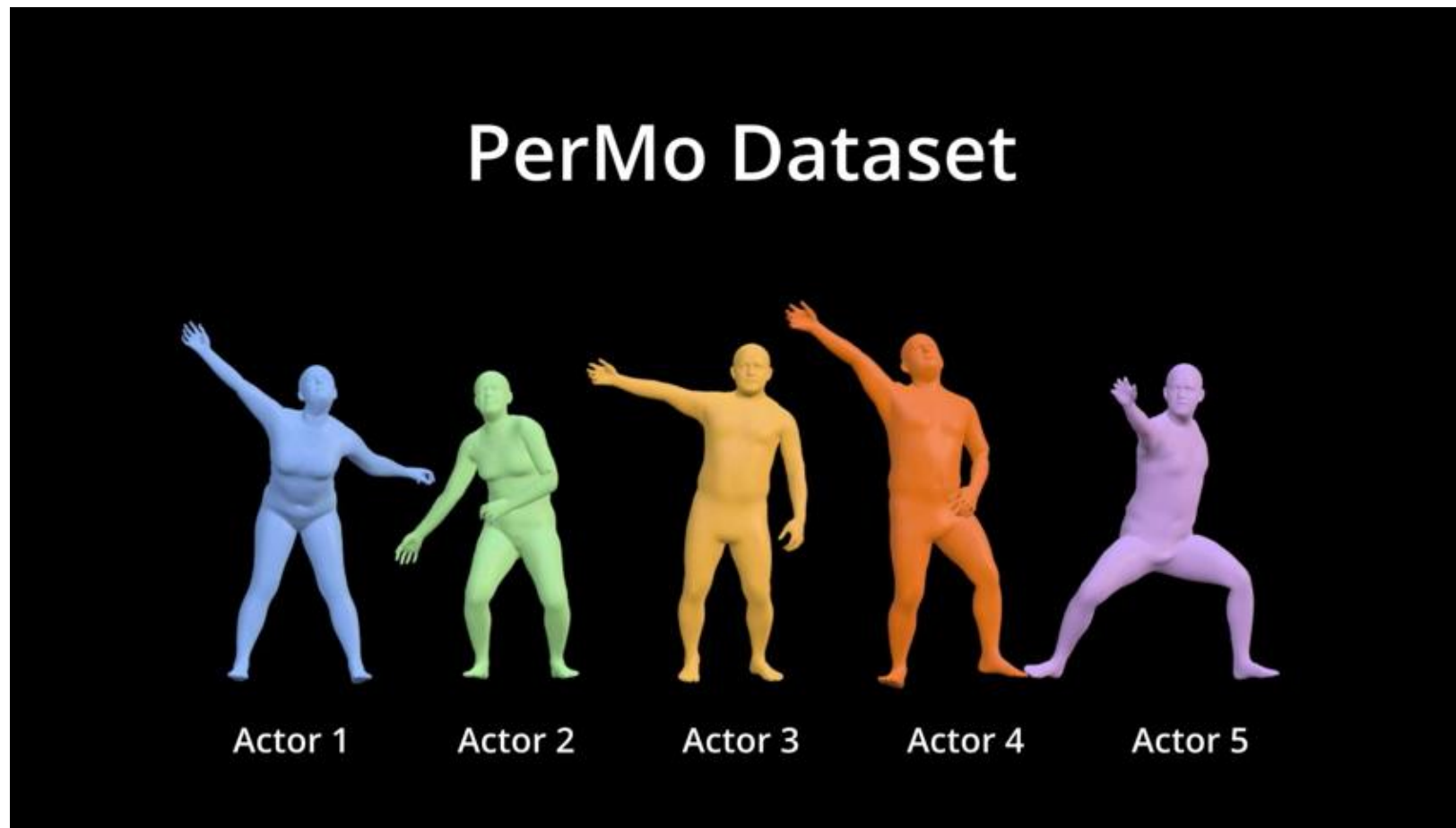
- 모션 개인화, 텍스트기반 모션 생성 (CVPR 2025)



Kim, B., Jeong, H. I., Sung, J., Cheng, Y., Lee, J., Chang, J.Y., Choi, S.I., Choi Y., Shin, S., Kim, J., & Chang, H. J. PersonaBooth: Personalized Text-to-Motion Generation. **CVPR, 2025.**

Human 관련 연구

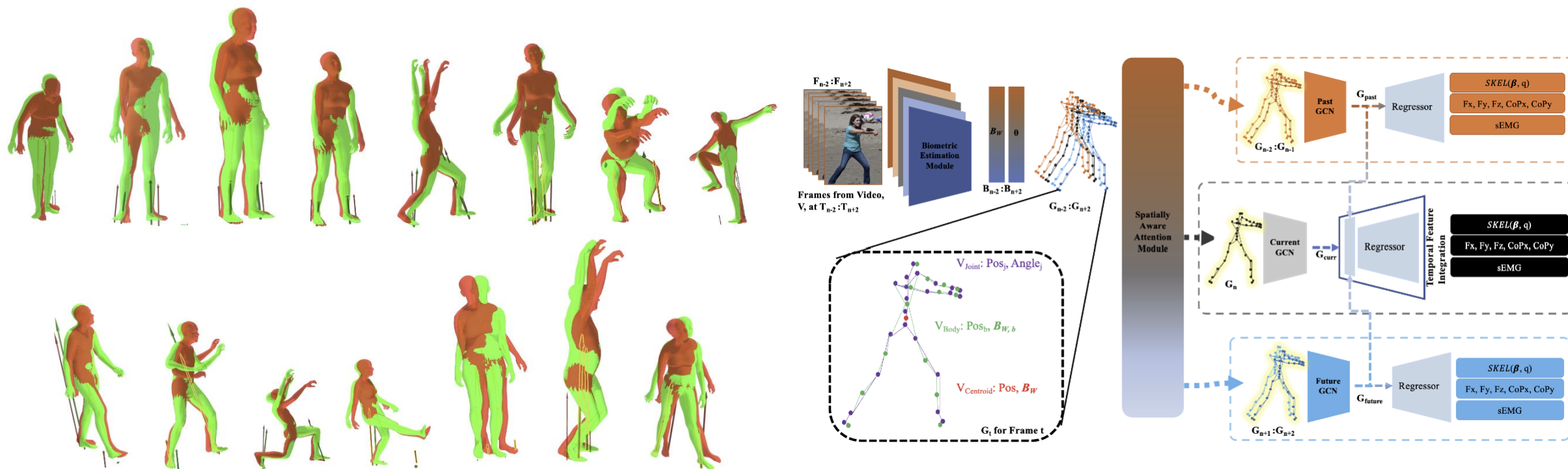
- 모션 개인화, 텍스트기반 모션 생성 (CVPR 2025)



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Human 관련 연구

■ 비디오 기반 근전도 및 지면 반력(GRF) 추정 (WACV 2026)



Dasgupta, E., **Kim, B. †**, Yeo, S.-H., & Chang, H. J. (Accepted/In press). SimForce: Force and Surface Electromyography from Full Body Video with Graph Neural Nets. **WACV 2026**

Human 관련 연구

- 시선 재지향 (MM 2025)



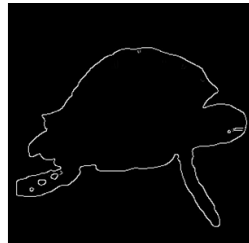
Choi, Y., Wang, H., Cheng, Y., **Kim, B. †**, Chang, H. J., Choi, Y., & Choi, S. I. †. Roll Your Eyes: Gaze Redirection via Explicit 3D Eyeball Rotation. **ACM MM 2025**

3D 관련 연구

■ 2D 스케치 기반 3D 객체 생성



A photo of Airplane



A photo of Turtle



A photo of Jack-o'-lantern



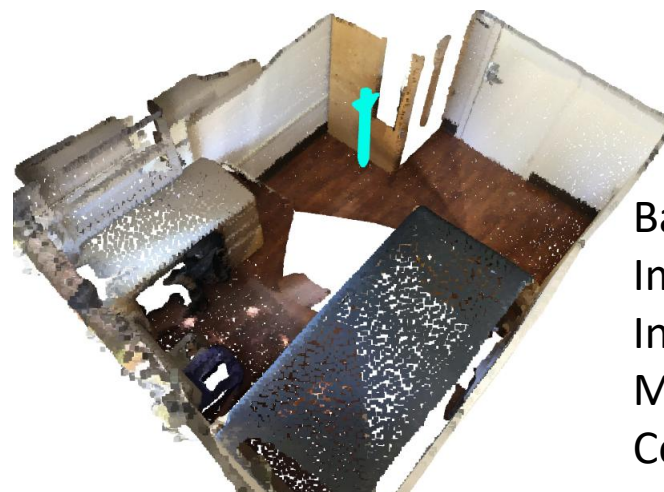
3D 관련 연구

- 3D 실내환경 내 유해 객체 검출

입력 포인트클라우드

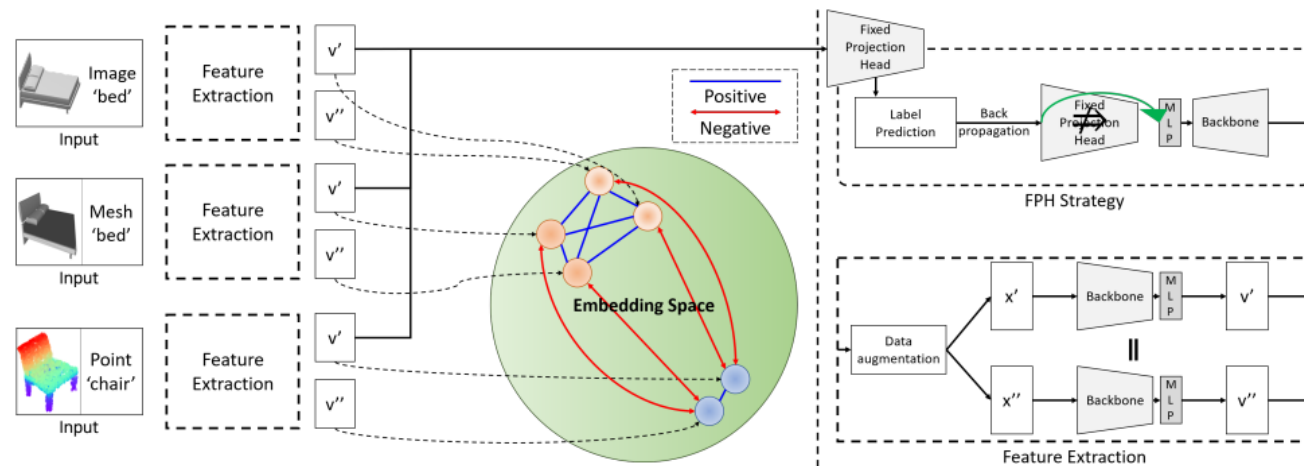
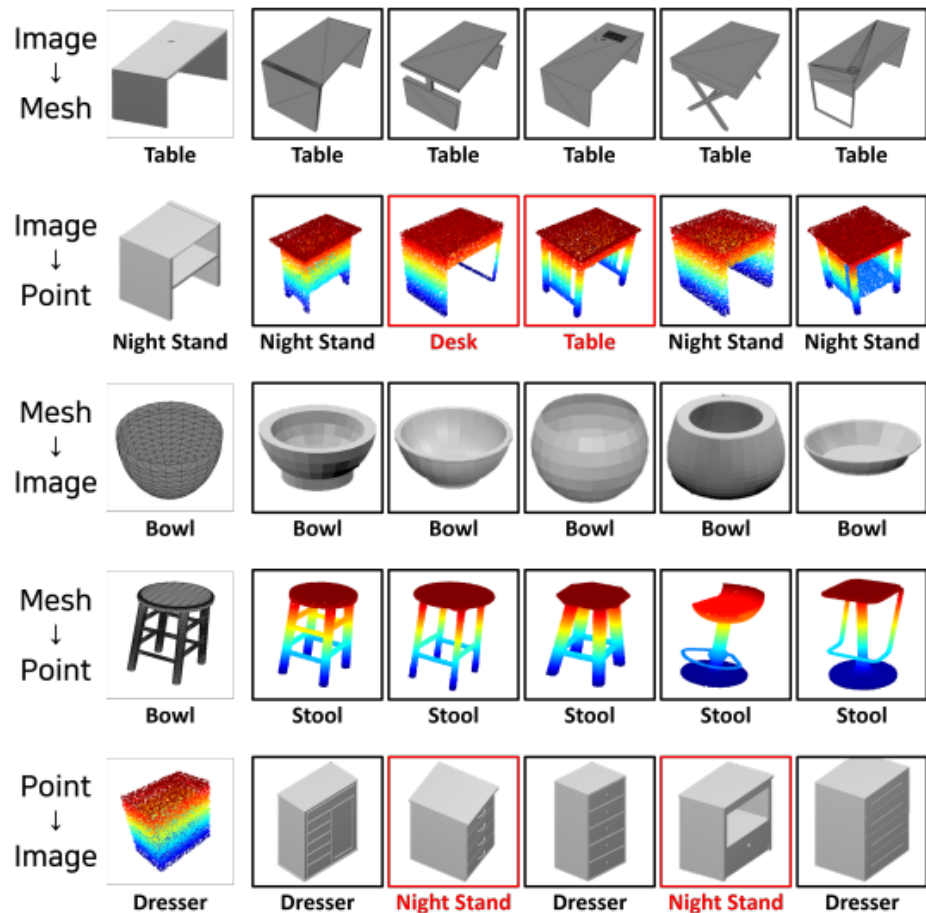


유해 객체 검출 결과



Baek, S., **Kim, B.**, Kim, J.
Improvement of 3D
Instance Segmentation
Model by Scene-to-Scene
Composition, IPIU, 2024

■ 3D Cross-Modal 검색



Choo, Y.*, **Kim, B.***, Kim, H., & Park, Y. Supervised Contrastive Learning for 3D Cross-Modal Retrieval. Applied Sciences, 2024.