ÒSCAR LORENTE COROMINAS

📞 (+34) 684 083 678 | ✉ oscar.lorente.co@gmail.com | 🏠 oscarlorente.github.io | ⌨ [oscarlorente](https://github.com/oscarlorente) | 🔗 [lorenteoscar](https://linkedin.com/in/lorenteoscar)

SKILLS

Programming	Python · C++/C · Matlab · SQL
Software	Blender · COLMAP · MeshLab · Qt Creator · ROS · Git · LaTeX
Libraries	PyTorch · OpenCV · Numpy · Pillow · Trimesh · Open3D · PCL · Detectron2

EDUCATION

M.Sc. in Computer Vision　　　　　　　　　　　　　　　　　　　　　　Barcelona, Spain
Universitat Autònoma de Barcelona - Computer Vision Center　　　　　　　Oct. 2020 - Sep. 2021
9.47/10 - Best Student Award

B.Sc. in Telecommunications Engineering　　　　　　　　　　　　　　Barcelona, Spain
Universitat Politècnica de Catalunya　　　　　　　　　　　　　　　　　　Sep. 2016 - Jul. 2020
9.10/10 in the Audiovisual Systems major

WORK EXPERIENCE

Research Intern · 3D Human Reconstruction Team (Python)　　　　　　Barcelona, Spain
Institut de Robòtica i Informàtica Industrial, CSIC　　　　　　　　　　May. 2021 - Now
- Automated a system to obtain detailed 3D human reconstruction from only a smartphone video using Implicit Differentiable Renderer (IDR)
- Improved the 3D reconstruction of specific body areas with an attention mechanism
- Integrated a method to align and evaluate 3D reconstructions in centimeters

Research Intern · LIDAR Point Clouds Processing Team (Python/C++)　Terrassa, Spain
Universitat Politècnica de Catalunya　　　　　　　　　　　　　　　　　Oct. 2020 - Apr. 2021
- Automated the 3D point cloud annotation process by transferring 2D labels
- Fine-tuned Deep Learning models in the LIDAR 3D pedestrian detection task
- Developed an annotation tool to label 3D bounding boxes with Qt Creator

Computer Vision Engineer · LIDAR-based 3D Perception Team (C++)　Terrassa, Spain
Beamagine S.L.　　　　　　　　　　　　　　　　　　　　　　　　　　Feb. 2020 - Jul. 2020
- Trained PointNet++ to classify pedestrians in 3D clusters
- Implemented a system to crop 3D human/background clusters from LIDAR point clouds by transferring 2D labels from RGB images
- Fine-tuned YOLOv3 improving pedestrian detection in outdoor RGB images

PROJECTS

Multi-view 3D People Reconstruction with Deep Learning (Python)　May. 2021 - Sep. 2021
- Explored the contribution of parametric models in implicit neural representations for multi-view 3D human reconstruction with very sparse views
- Obtained 0.63 centimeters of Chamfer distance in the 3D human reconstructions

Nvidia AI-City Challenge · **Multi-Target Multi-Camera Tracking** (Python)　Feb. 2021 - Apr. 2021
- Designed a car Re-Identification system using siamese networks and metric learning
- Fine-tuned Faster R-CNN with Detectron2 improving car detection up to 0.97 mAP
- Performed car tracking with Kalman filter and the estimated optical flow