

IAN RIERA SMOLINSKA

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SKILLS

Languages Python · C/C++ · JavaScript · Matlab
Tools ROS · Visual Studio · Git · Linux · Qt Creator · \LaTeX
Libraries Open3D · PyVista · OpenCV · PyTorch · Tensorflow · Detectron2 · Scikit-Learn · Pandas
Fields 3D Reconstruction · Multi Target Tracking · Sensor Fusion · Object Detection · GAN
Management Agile · DevOps · Trello · Notion

EDUCATION

M.Sc. in Computer Vision - Top 5 Student Award Oct. 2020 – Sept. 2021
Universitat Autònoma de Barcelona — [Computer Vision Center \(CVC\)](#) Barcelona, Spain

M.Sc. in Telecommunications Engineering Oct. 2017 – Jul. 2019
La Salle - Universitat Ramon Llull (URL) Barcelona, Spain

B.Sc. in Telecommunications Engineering Sept. 2011 – Sept. 2017
Universitat Politècnica de Catalunya Barcelona, Spain

EXPERIENCE

Computer Vision Engineer May 2022 – Present
coatingAI - 3D Reconstruction Barcelona, Spain

- Implementation of a ROS 3D object reconstruction pipeline.
- Implementation of the required camera drivers.
- Research and implementation of point cloud reconstruction, denoising and matching algorithms.
- Front-end web development with Vue.js.

Computer Vision Engineer May 2021 – May 2022
Beamagine - Perception Research Team Terrassa, Spain

- Implementation of multimodal CNN-based 2D pedestrian detector.
- Development of point cloud visualization and annotation tools using Qt Creator and OpenGL.
- Fine-tuning and evaluation of CNN for LIDAR-based 3D pedestrian detection.

Junior Project Manager Jul. 2019 – Aug. 2020
ITnow - Backends & Cloud Support Barcelona, Spain

- Architecture & Backend: CPU & Memory capacity plan, alert monitoring, security compliance and continuity plan.
- Cloud Engineer: Agile squad, offering technical support to migrate applications from local servers to the cloud. Elasticsearch, Jenkins and K8S.

Internship Mar. 2018 – Jul. 2018
Barcelona City Council - Systems and Operations Barcelona, Spain

- Proof of concept of NLP-based chatbot.

Internship Oct. 2017 – Feb. 2018
EY - IT Security Risk FSO Barcelona, Spain

- Security risk assessment and data access control.

PROJECTS

Pedestrian Detection from 3D Geometry in High Density Point Clouds | *Python* Sept. 2021

- Study of the limits of 3D detection when relying only the geometric information, implementing point-based neural networks on LiDAR data.
- Analysis of the detector's performance basing on the object's position and geometry characteristics.

Multi-Target Multi-Camera Tracking - Nvidia AI-City Challenge | *Python* May 2021

- Implementation of Faster-RCNN with Detectron2 to perform object detection on traffic cameras.
- Used Kalman filters and optical flow for car tracking across a single camera.
- Development of multi-camera multi-object tracking system, using Metric Learning and Siamese networks to identify cars across different cameras.