Daniel Hernández Juárez

CONTACT INFORMATION	dhernandez0@gmail.com	https://danihernandez.eu
	Barcelona, Catalonia, Spain	Nationality: Spanish

PROFESSIONAL EXPERIENCE

Senior Research Engineer — May 2020-May 2024
Slamcore, Remote
Computer Vision, Deep learning, Panoptic Segmentation, CUDA, TensorRT
- Developed a fast panoptic segmentation model for Xavier NX achieving 30 fps.
- Contributed to an ICRA paper on deep learning-based depth completion.

Research Engineer — March 2019-February 2020
Huawei Noah's Ark lab, London, United Kingdom
Computer Vision, Deep learning, Color Constancy (Auto White Balance)
- Authored a CVPR paper on deep learning-based multi-camera color constancy.

EDUCATION

PhD in Computer Vision — 2020
Universitat Autònoma de Barcelona, Spain
- Thesis title: Embedded 3D Reconstruction for Autonomous Driving
- Adapt to GPU and parallelize (CUDA) computer vision algorithms.
- Computer Vision contributions: Developed a faster and more accurate version of the Stixel World.
- PhD Internships at Mercedes-Benz Group AG in Germany and Element AI (ServiceNow) in Canada

MSc in Computer Vision — 2015
Universitat Autònoma de Barcelona, Spain

Bachelor of Computer Science — 2014
Universitat Autònoma de Barcelona, Spain

PUBLICATIONS

Journal Papers
Self-Supervised Depth Completion for Active Stereo — 2022
In *IEEE Robotics and Automation Letters (2022)* (**RA-L and ICRA**)

3D Perception with Slanted Stixels on GPU — 2021
In *IEEE Transactions on Parallel and Distributed Systems (2021)* (**TPDS**)

Slanted Stixels: A way to represent steep streets — 2019
In *International Journal of Computer Vision (2019)* (**IJCV**)

Conference Papers
A Multi-Hypothesis Approach to Color Constancy — 2020
In *Computer Vision and Pattern Recognition 2020* (**CVPR**)

Slanted Stixels: Representing San Francisco's Steepest Streets — 2017
In *British Machine Vision Conference 2017* (**BMVC**)
Awarded as **Best Industry Paper**

GPU-accelerated real-time stixel computation — 2017
In *Winter Conference on Applications of Computer Vision 2017* (**WACV**)

Embedded real-time stereo estimation via Semi-Global Matching — 2016
In *International Conference on Computational Science 2016* (**ICCS**)

SKILLS

Python, C/C++, CUDA, Matlab, OpenCV, numpy, PyTorch, Tensorflow

AWARDS

Extraordinary PhD Prize - Universitat Autònoma de Barcelona	2023
Best Industrial Paper Award - BMVC	2017