Daniel Hernández Juárez

Contact Information

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

Professional Experience

Senior Research Engineer — **May 2020-Currently**
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.

PhD Internship — **January 2017-July 2017**
Mercedes-Benz Group AG, Stuttgart, Germany
Computer Vision, Stixel World, 3D representation of driving scenes

- Developed a faster and more accurate version of the Stixel World.

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.

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**