Carlos Gálvez

Personal Information

Date of Birth	December 29th 1991
Nationality	Spanish
Address	Nordostpassagen 23 Lgh 1203, 413 11 Gothenburg, Sweden
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Experience

Aug 2015 - Present — **Software Developer - Sensor Fusion** at Volvo Car Corporation
Development of algorithms for raw sensor data fusion for on-road obstacle detection, in the context of Volvo Cars' autonomous driving project *Drive Me*. Working with lidar, radar and camera data. High-performance implementation to meet real-time requirements. Experience in safety-critical coding practices as well as the ISO 26262 standard. Agile development and continuous integration workflow.

Jun 2014 - Jul 2014 — **Research Engineer** at KTH, Sweden
Development of an autonomous robot to perform 3D mapping with Kinect-like cameras in hardly accesible environments. Based on ROS, OpenCV and PCL. In collaboration with the Computer Vision and Active Percepction Lab (CVAP) at KTH and Trafikverket (Swedish Transport Administration).

Oct 2012 - Oct 2013 — **Fellowship** at E.T.S.I.T. UPM, Spain
Development of an automatic parking lot occupancy estimation system based on computer vision techniques. Involved in the national project "Ciudad 2020". Based on OpenCV and Qt libraries. In collaboration with the Group of Application of Visual Telecommunications at ETSIT-UPM. Scientific paper published in ITS [1].

Oct 2011 - Oct 2012 — **Fellowship** at E.T.S.I.T. UPM
Development and integration of a new educational platform for the study of ARM microcontrollers at the Electronic Systems Laboratory. In collaboration with the Electrical Engineering Department at ETSIT-UPM

Oct 2009 - Oct 2010 — **Fellowship** at E.T.S.I.T. UPM, Spain
Design of an automated optical handwritten character recognition system (OCR), with the aim of making easier and more efficient various teaching and administrative tasks. In collaboration with the Telematics Engineering Department at ETSIT-UPM.

EDUCATION

AUG 2013 - JUN 2015	**Systems, Control and Robotics, Msc** at KTH Royal Institute of Technology, Stockholm (Sweden). Master Thesis: "Grid-Based Multi-Sensor Fusion for On-Road Obstacle Detection: Application to Autonomous Driving" [2]| Advisor: Prof. John FOLKESSON, Examiner: Prof. Patric JENSFELT. GPA: A
AUG 2013 - JUN 2015	**Civilingenjörsutbilding, MSc Electrical Engineering** at KTH Royal Institute of Technology, Stockholm (Sweden).
SEP 2009 - JUN 2015	**Telecommunication Engineering, (5-year programme, MSc accredited by ABET)**, at E.T.S.I. Telecomunicación, Universidad Politécnica de Madrid, Madrid (Spain). GPA: 9.20/10.0

PROJECTS

SEP 2015 - PRESENT	Autonomous quadcopter.
OCT 2014 - DEC 2014	Robot for the course DD2425 - Robotics and Autonomous Systems. Award: winner of robot competition
SEP 2012 - JAN 2013	Special Project for the course "Digital Electronics Systems Laboratory". Augmented Reality mobile application to track and control robots, and display additional information on line-following competitions.
JAN 2012 - JUN 2012	Design and implementation of line-following robot. Participation in Robotech-UPM and Campus Party robotic competitions.
SEP 2011 - JAN 2012	Project for the course "Introduction to Intelligent Robotics", focused on robot learning based on genetic algorithms.

HONOURS AND AWARDS

2009 - 2013	Extraordinary Academic Performance Scholarship (Madrid Government)
2009	Highest Honours in High School. Best academic record.

LANGUAGES

SPANISH:	Mothertongue
ENGLISH:	Fluent *TOEFL iBT: 110/120, September 2012 (Spain)*
SWEDISH:	Advanced, *CEFR: B2, June 2015 (Sweden)*

SOFTWARE SKILLS

PROFICIENT	Java, C, C++, Python, MATLAB & SIMULINK, OpenCV, PCL, ROS, Qt
INTERMEDIATE	Linux, CMake, OpenGL, OpenCL, CUDA, Bash scripting, Git, Gerrit, LaTeX
BASIC	HTML, CSS, JavaScript, J2EE, SQL, Android, ASM, VHDL

Git repository: https://github.com/carlosgalvezp

INTERESTS

Travelling, photography, hiking, cycling, reading, movies, music.

PUBLICATIONS

[1] C. Gálvez, J. Torres, and J. M. Menéndez. "Vacant parking area estimation through background subtraction and transience map analysis". In: *IET Intelligent Transport Systems* 9.9 (2015), pp. 835–841.

[2] C. Gálvez. “Grid-Based Multi-Sensor Fusion for On-Road Obstacle Detection: Application to Autonomous Driving”. MA thesis. KTH, Computer Vision and Active Perception, CVAP, 2015.