Carlos Gálvez

PERSONAL INFORMATION

DATE OF BIRTH	December 29$^{\text{th}}$ 1991
NATIONALITY	Spanish
ADDRESS	Nordostpassagen 23 Lgh 1203, 413 11 Gothenburg, Sweden
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EDUCATION

AUG 2013 - JUN 2015

Systems, Control and Robotics, Msc
KTH Royal Institute of Technology, Stockholm, Sweden.
Master Thesis: "Grid-Based Multi-Sensor Fusion for On-Road Obstacle Detection: Application to Autonomous Driving" [1]. Advisor: Prof. John FOLKESSON, Examiner: Prof. Patric JENSFELT. GPA: A

AUG 2013 - JUN 2015

Civilingenjörsutbilding, MSc Electrical Engineering
KTH Royal Institute of Technology, Stockholm, Sweden

SEP 2009 - JUN 2015

Telecommunication Engineering, (5-year programme, MSc accredited by ABET)
E.T.S.I. Telecomunicación, Universidad Politécnica de Madrid, Madrid, Spain.
GPA: 9.20/10.0

EXPERIENCE

AUG 2015 - PRESENT

Software Developer - Sensor Fusion at Volvo Car Corporation
Development of algorithms for sensor data fusion, including lidar, radar and camera, in the context of Volvo Cars' autonomous driving project *Drive Me*. Experience in high-perfomance computing, 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 vision-based parking occupancy estimation system, using OpenCV and Qt libraries. Involved in the national project "Ciudad 2020". In collaboration with the Group of Application of Visual Telecommunications at ETSIT-UPM. Scientific paper published at IET-ITS [2].

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.

Projects

SEP 2015 - PRESENT	Autonomous quadcopter based on Arduino Mega 2560 and Raspberry Pi 2.
MAR 2015 - JUN 2015	Face detector combining Adaboost and Deep Learning.
OCT 2014 - DEC 2014	Robot for the course DD2425 - Robotics and Autonomous Systems. Award: winner of robot competition
SEP 2012 - JAN 2013	Augmented Reality mobile application to track and control robots. Special Project for the course "Digital Electronics Systems Laboratory".
JAN 2012 - JUN 2012	Line-following robot. Participation in Robotech-UPM and Campus Party robotic competitions.
SEP 2011 - JAN 2012	Predator-prey robot system learning based on genetic algorithms. Project for the course "Introduction to Intelligent Robotics"

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.
Acquiring new knowledge through online courses (MOOC): Coursera, Udacity, edX.

Publications

[1] **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.

[2] **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.