

Carlos Gálvez

PERSONAL INFORMATION

DATE OF BIRTH	December 29 th 1991
NATIONALITY	Spanish
ADDRESS	Prinsgatan 11, Lgh 1401, 413 05 Gothenburg, Sweden
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EDUCATION

OCT 2016 - PRESENT	Self-Driving Car Engineer Nanodegree UDACITY. Deep Learning, Computer Vision, Sensor Fusion, Localization and Mapping, Control.
AUG 2013 - JUN 2015	Systems, Control and Robotics, MSc KTH ROYAL INSTITUTE OF TECHNOLOGY, Stockholm, Sweden. Master's Thesis on Sensor Fusion for Autonomous Driving [1]. Advisor: Prof. John FOLKESSON, Examiner: Prof. Patric JENSELT. GPA: A.
AUG 2013 - JUN 2015	Civilingenjörsutbildning, MSc Electrical Engineering KTH ROYAL INSTITUTE OF TECHNOLOGY, Stockholm, Sweden.
JUL 2014 - AUG 2014	Tohoku University Engineering Summer Programme (TESP) TOHOKU UNIVERSITY, Sendai, Japan. Lectures and seminars related to Robotics. Project: lidar-based obstacle avoidance.
SEP 2009 - JUN 2015	Telecommunication Engineering, (5-year programme, MSc accredited by ABET) E.T.S.I. TELECOMUNICACIÓN, UNIVERSIDAD POLITÉCNICA DE MADRID, Spain. GPA: 9.20/10.0.

EXPERIENCE

AUG 2015 - PRESENT	Software Developer - Sensor Fusion at VOLVO CAR CORPORATION, Sweden Development of algorithms for sensor data fusion, including lidar, radar and camera, in the context of Volvo Cars' autonomous driving project <i>Drive Me</i> . Experience in high-performance computing, safety-critical code as well as the ISO 26262 standard. Agile development and continuous integration workflow.
JUN 2014 - JUL 2014	Research Engineer at COMPUTER VISION AND ACTIVE PERCEPTION LAB, 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.
OCT 2012 - OCT 2013	Fellowship at SIGNALS AND SYSTEMS DEPARTMENT, ETSIT-UPM, Spain Development of a vision-based parking occupancy estimation system, using OpenCV and Qt libraries. Involved in the national project <i>Ciudad 2020</i> , related to smart cities. Scientific paper published at IET-ITS [2].
OCT 2011 - OCT 2012	Fellowship at ELECTRICAL ENGINEERING DEPARTMENT, ETSIT-UPM, Spain Development and integration of a new educational hardware platform for the study of ARM microcontrollers at the Electronic Systems Laboratory.
OCT 2009 - OCT 2010	Fellowship at TELEMATIC ENGINEERING DEPARTMENT, ETSIT-UPM, Spain Design of an optical handwritten character recognition system (OCR), with the aim of automatizing various teaching and administrative tasks.

PROJECTS

SEP 2015 - PRESENT	Autonomous quadcopter. Based on Arduino Mega 2560 and Raspberry Pi 2.
MAR 2015 - JUN 2015	Face detector. Image-based, combining Adaboost and Deep Learning. Project for the course <i>Image Recognition and Classification</i> .
OCT 2014 - DEC 2014	Maze exploration robot. Control, 3D object recognition, mapping, localization and planning. Project for the course <i>Robotics and Autonomous Systems</i> .
SEP 2012 - JAN 2013	Augmented Reality mobile application. Real-time visual tracking and control of robots. Special Project for the course <i>Digital Electronics Systems Laboratory</i> .
JAN 2012 - JUN 2012	Line-following robot. Participation in Robotech-UPM and Campus Party robotic competitions.
SEP 2011 - JAN 2012	Adversarial learning through genetic algorithms. Predator-prey robot learning simulation. Project for the course <i>Introduction to Intelligent Robotics</i> .

HONOURS AND AWARDS

2015	Winner of the robot contest for the course <i>Robotics and Autonomous Systems</i> .
2009 - 2013	Extraordinary Academic Performance Scholarship (Madrid Government).
2009	Highest Honours in High School. Best academic record (GPA: 10.0/10.0).

LANGUAGES

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

COMPUTER SKILLS

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

GitHub repository: <https://github.com/carlosgalvezp>

INTERESTS

Travelling, photography, hiking, cycling, reading, movies, music.
Learning through online courses (MOOC): Coursera, Udacity, edX, etc.

PUBLICATIONS

- [1] **C. Gálvez.** "Grid-Based Multi-Sensor Fusion for On-Road Obstacle Detection: Application to Autonomous Driving". M.S. 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.