Cristian González Guerrero

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Professional Experience

2017 **Infineon Technologies AG (UGR/OTRI)**, *IoT firmware developer*, Granada.
Implementation of security protocols in ARM Cortex-M devices.
Implementation of drivers for security chips in TI-RTOS.
Technical documentation writing and preparation.

2016 – 2017 **eesy-innovation (Fundación General UGR-Empresa)**, *IoT firmware developer*, Granada.
TLS protocol implementation for data security in IoT devices.
Software development for embedded systems based on ARM Cortex-M running RTOS.

2016 **Infineon Technologies AG**, *Engineering trainee (4-months internship)*, Munich, Germany.
Design and implementation of embedded systems, from devision and software architecture to final implementation and test.
Implementation of network protocols in a multitask system based on RTOS. Data security evaluation. **Best demo award (IEEE SECON 2016)**, for the project **RedFixHop**.

2016 **eesy-innovation GmbH**, *Engineering trainee (3-months internship)*, Munich, Germany.
Design and implementation of inventory system.
Desing and implementation of real-time embedded systems.
Implementation and test of air-quality sensors in embedded systems for IoT.
Chip Card & Security (CCS) Special Award, for the project **Internet of Things & Security Shields**, presented to the Application Design Contest 2016, organised Infineon.

Languages

Spanish	**First language**	
English	**Advanced level**	*C1 certified by Cambridge Language Assesment. (C1 effective level)*
French	**Intermediate level**	*Language spoken during the Erasmus year. (B2 effective level)*
German	**Basic level**	*Basic course during the internship in Munich (A1 effective level)*

Academic Training

2016 – 2018* **Master in Data Science and Computer Engineering**, *University of Granada*.

2010 – 2015 **Bachelor degree in Telecommunications Technology Engineering, specialized in Electronic Systems**, *University of Granada*, Average mark: 7.479 over 10.
Final project: Adaptive filter-based digital system for fetal heart rate extraction (9.8 over 10).

2013 – 2014 **Erasmus in Louvain-la-Neuve, Belgium**, *Université Catholique de Louvain*.

Complementary Training

2016 **Machine learning**, *Stanford University*, Coursera.

2014 – 2015 **III Entrepreneurship Course for Undergraduates**, *Aula Andalucía Emprende*.
Special mention for the third best business idea.

2013 **Scratch: Introduction to Teaching Programming to Kids. II Edition**, *CEVUG*.

Technical Skills

Internet of Things and Coding Skills

Knowledge in telecommunications network architecture and IoT fundamentals (UMTS, IPv4/6, LoRa). Experience in network protocol stacks (POSIX sockets, lwIP, HTTP, MQTT, JSON).

Knowledge in data security and cryptographic protocols (AES, ECC, TLS). Experience in porting different security protocols implementations (mbedTLS, WolfSSL).

Experience in implementing IoT protocols on different systems and hardware architectures (GNU/Linux, RTOS, Raspberry Pi, ARM Cortex-M).

Advanced knowledge in low-level programming for embedded applications and code optimization (C/C++, GDB). Experience in different toolchain for embedded software development (Makefile, Eclipse, DAVE, CCStudio). Experience in different Real-Time Operating Systems (MicroC/OS II, TI-RTOS, CMSIS-RTOS). Experience in use of version control for efficient software development (Git, SVN).

Experience in IoT production APIs and services (Amazon Web Services, Phillips Hue, openHAB). Experience in designing and developing web applications (HTML5, JavaScript, CSS3).

Electronics and Industry

Analysis, simulation and design of digital and analog electronic circuits (Proteus, NI Multisim, PSpice). Knowledge in power and high-frequency electronics (Agilent ADS, VNA). Experience in circuit prototyping and PCB design and fabrication (Eagle).

Design and prototyping of embedded and real-time systems using microcontrollers and programmable logic (XMC, TI-MCU, Arduino, PIC, VHDL, Verilog). Process control and automation using software algorithms and hardware solutions.

Knowledge in design and characterization of sensors. Knowledge in industrial robotics.

Other technical skills

Knowledge in system modelling and simulation. Advanced knowledge in digital signal processing (Matlab, LabView, GNU Octave, Mathematica).

Experience in IT and office automation (MS Windows, MS Office, GNU/Linux, LaTeX).

Basic knowledge in graphic design (Gimp, Inkscape, Photoshop).

Other skills

B driving license Entrepreneurial spirit Team working skills Love to speak in public
Interest in culture Interest in teaching Interest in science communication.