CARLOS GHABROUS LARREA

carlos.ghabrous@gmail.com
+41 76 489 94 05
https://github.com/carlosghabrous

04.02.1980
Spanish

Rue du Beulet, 8
1203, Geneva
Switzerland

Telecommunication Engineer by training. Software developer by heart. 10 years experience of SW development in projects ranging from embedded systems to web applications. Over the last years I have also enjoyed carrying out project management activities and coordinating multidisciplinary teams to reach common goals. Strong believer in fostering communications as a key for success in any project

EDUCATION

M. Sc. Telecommunication Engineering
E.T.S.I.T. Málaga, 2008

SKILLS

Programming Languages	C, Python, Go, SQL
Programming Techniques	Design patterns, multithreading
Tools	IDEs (VSCode), version control (Git), tracker (Jira), doc (Wiki, Doxygen), CI/CD, containers (Docker, Kubernetes)
Protocols	TCP/IP, GSM, IEEE 802.16d-e, OTA
Certifications	PMP, ITIL v3
Training	Embedded C++, Linux administration, Effective communication
Soft skills	Empathetic, positive thinking, structured, persistent, organized, team player

LANGUAGES

Spanish	Native
English, French	Full professional proficiency
German	Elementary proficiency

ABOUT

When I am not working or parenting, I love pushing my limits training to compete in mid/long distance triathlon races. also love music and playing drums if neighbours allow it

EXPERIENCE

2016 - 2020

SW engineer, Power converters controls, CERN, Geneva (CH)

Developed SW for an in-house embedded platform (C) and developed communication and utilities libraries (Python).
I have also recruited and supervised young engineers for diverse projects. This role also involved project management and coordination of activities with different distributed teams that affect O(1000) equipments. 24/7 on-call support

- Designed a system to remotely reprogram electronic boards. Embedded SW in C, upper layers in Python, Oracle databases. SW/HW integration and collaboration with multidisciplinary teams (hardware, firmware, databases). Significant impact, replacing ad-hoc manual board reprogramming by remote interventions, thus reducing the downtime in accelerators due to maintenance
- Developed a Python library to communicate with our embedded controls platform using asynchronous techniques (asyncio). Improved query time by 50-60%, LOC reduction of 90% compared to its Perl predecessor
- Led the project to migrate the controls platform and related SW on O(1000) power converters. Requirements elicitation, processes streamlining, schedule management, stakeholder engagement, follow up meetings

2010 - 2015

SW developer, CMS CERN, Geneva (CH)

Responsible for the development and maintenance of common components of the L1-Trigger, used by a community of ~30 developers. Provided to different development groups with the necessary infrastructure to ensure a smooth and high quality SW development cycle, as well as offered support and consultancy services for bugs resolution and tasks development. 24/7 SW on-call expert, student supervisor

- Designed and implemented common core packages (C++) and associated database (Oracle) for the control and monitoring of the CMS upgraded trigger electronics, based on the uTCA standard
- Developed a web application to monitor essential processes for the trigger operation. Reduced L1-Trigger downtime by 20% thanks to its alarm generation mechanism
- Set up a nightly build system for the online trigger SW repository, easing the development cycle and introducing standard practices within the trigger group, such as code reviews and automated testing

2008 - 2010

GSM & radio engineer CERN, Geneva (CH)

Responsible for CERN's mobile phone and VHF networks, with ~5000 and ~50 users respectively, and their monitoring system based on GSM probes. Followed up closely different projects with our service provider

- Conducted studies to extend the GSM coverage in indoor facilities, such as buildings and tunnels, using antennae and leaky feeder cables. Commissioned new installations
- Commissioned and maintained the GSM monitoring system (~40 GSM probes)

2007 - 2008

Technical student CERN, Geneva (CH)

Designed a system to allow mobile terminals to be remotely configurable for GRPS access. The system consisted on a GPRS/SMS modem installed on a Linux server and the control SW developed in Perl

- This project was successfully deployed and used at CERN along with an additional service to browse LDAP directories via SMSs
- Presented this work as the Master Thesis project in Telecommunication Engineering: *"Remote configuration of mobile phones to access GPRS data services"*, obtaining A grade

2005 - 2006

WiMAX test engineer Dekra, Malaga (ES)

Within Dekra (former AT4Wireless), I carried out different activities that made a significant contribution to set up the first WiMAX certification laboratory.

- Designed, implemented radio, protocol and interoperability conformance test beds for the IEEE 802.16d standard. Contributed to making AT4Wireless to be the first WiMAX certification laboratory
- Technical support, troubleshooting for different international vendors, providing continuous guidelines on the certification process and feedback

ACHIEVEMENTS