Maria Teresa Blanco Abad

WORK EXPERIENCE

Cognizant Technology Solutions   **Amsterdam, Netherlands**
Technical Consultant in Industry+   May. 2021 − Present
- Performed data analysis in Python and delivered technical documents for the temperature tracking in a cold chain monitoring project for a Pharmaceutical company.
- Developed a Near Real-Time object detection system in Python for a Pharmaceutical company.
- Customized in Java a rating and billing engine for a Logistics provider.
- Azure fundamentals certified // Mendix intermediate certified

Geberit   **Rapperswil-Jona, Switzerland**
Digital Products Technical Intern   Jan. 2021 − April 2021
- Reduced external consultancy costs for a current piping project by building a temperature-logging device using Python, Bash and Azure APIs (App Service, IoT Hub). The data gathered lead to modifying initial development assumptions.
- Developed a fast prototype for validating an idea for a roof drainage system: a roof control system built with a Raspberry Pi, sensors, Python, and a cloud solution for hosting an online dashboard resulted in the start of a market research for potential customers.
- Created training material, programmed in C++ an ESP32 and conducted an IoT workshop for 4 senior managers at Geberit leading to the establishment of technical workshops to encourage development of digital products.

Silverwing   **Delft, Netherlands**
Part-Time Embedded Software Developer   Oct. 2018 − Sept. 2019
- Programmed in C++ the CAN communication interface between the flight computer and the flying vehicle's propellers. Integrated the C++ application in the software stack of the RTOS flight control platform. Acted as responsible for Software during the performance tests of the propellers.
- Selected electrical components for the actuation of the control surfaces of the vehicle.

TWTG   **Rotterdam, Netherlands**
Embedded Software Intern   June 2019 − Aug. 2019
- Deployed a DNS and network server on a Raspberry Pi for the LoRa gateway. Enabled the communication between the web application and the network server through MQTT to schedule over-the-air firmware updates.
- Improved and tested an application in C++ to perform firmware updates over the air in LoRa devices.

Amadeus IT group   **Boston, USA**
Software Development Intern   May 2017 − March 2018
- Developed features in Java 8 and XML for the back-end of a web application for business trips bookings. The web users are Amadeus employees from the offices in North America and corporate clients.
- Designed the Software architecture for a real-time dashboard: used Python, Amadeus internal APIs, Ruby on Rails, CSS, and HTML5.
- Followed Scrum methodology to track the tasks completed and to ensure continuous deployment of Software.

EDUCATION

Delft University of Technology, TU Delft   **Delft, Netherlands**
M.Sc. in Embedded Systems, Concentration in Software and Networking.   Sept. 2018 − Dec. 2020
MSc thesis title: "Designing and implementing SFMAC: A MAC protocol for LoRa networks for efficient use of unlicensed bands" Grade: 8.5/10.

Chalmers University   **Gothenburg, Sweden**
Exchange semester as part of the UNITECH Program   Sept. 2019 − Jan. 2020
Followed M.Sc. level courses in Telecommunication Engineering and Management of Technologies.

University of Rhode Island   **Kingston, Rhode Island, USA**
Study abroad one year as part of the North America scholarship of University of Zaragoza.   Sept. 2016 − May. 2017
B.Sc. thesis title: "SARNET: Search and Rescue Network". GPA 3.86/4, on Dean's list.

Universidad de Zaragoza   **Zaragoza, Spain**
B.Sc. in Industrial Engineering Technology   Sept. 2013 − May. 2017

PROJECT WORK

MSc thesis   **TU Delft**   Jan. 2020 − Nov. 2020
- Simulated in ns3, C++, LoRa networks and designed a MAC protocol. Tested the protocol with traffic from a COVID-19 social-distancing-monitoring application leading to double traffic capacity compared to current LoRa networks.
- Developed in Python scripts for optimizations using Gurobi solver. Used scikit-learn and statsmodels to perform statistical and time series analysis of the traffic generated in the LoRa network.

Quadcopter control   **TU Delft**   Mar. 2019 − Jun. 2019
- Programmed in C the main functions for control of a quadcopter: communication protocol for RS232, pitch yaw and roll control, filtering of raw data from sensors with a Kalman filter.

SmartPhone Sensing   **TU Delft**   Mar. 2019 − Jun. 2019

- Developed an Android App for indoor localization. Used Bayesian inference to locate the user by determining the closest indoor WiFi router. Tested and optimized the output from different phone sensors: gyroscope, magnetometer, accelerometer.

LEADERSHIP EXPERIENCE

UNITECH Program Participant Sept. 2019 − Aug. 2020
- **Jan. 2020**. Presented a preliminary study for developing a new product to the management of a corporate partner. Deliverables: research of the sanitary ware market, composition of a business canvas, proposal of the technical features and development of a high-level marketing strategy.
- **Sept. 2019**. Attended a one-week module in ETH Zurich consisting of workshops guided by corporate partner coaches focused on core-relational, leadership and management skills.

Representative of Industrial Engineering students Sept. 2014 − June 2016
- Acted as the main link between the Bachelor's coordinator and students (around 200 students). Deliverables: scheduling of exams, solving inconsistencies in the content of courses, organizing the Bachelor's graduation event.
- **March 2016**. Organized a symposium during the Engineering Cultural week.

TECHNICAL SKILLS

Software: Python (Advanced) | C (Advanced) | C++ (Advanced) | Java - Android and Mockito (Intermediate) | CSS and HTML5 (Basic) | Node.JS (Basic) | Azure (IoT Hub, Event Hub, Blob Storage) | Bash scripting UNIX/Linux (Basic)
Hardware: Raspberry Pi | ARM MCUs | Arduino | USRP, software defined radio | OcPoc, RTOS real-time operating system

OTHER SKILLS

Languages: Spanish (Native) | English (Full professional working proficiency) | French (Professional working proficiency) | Dutch (Elementary)