

Felipe Nicolás Diniello

Current Job

Globant

2017 - Present **IoT Studio, Buenos Aires, Argentina.**

Position: IoT Edge Engineer (SME.)

Team size: 8 SW and FW engineers

Duties:

Technical assistance in pre-sales for cloud based solutions that require any kind of interaction with hardware devices.

Overview R&D projects for prototypes or proof of concepts to demonstrate viability on new ideas coming from clients or for internal purposes.

Develop and Architect solutions for embedded software applications or firmware over different architectures or OS:

Used tools:

- Azure IoT: Hub, Edge and Provisioning Service
- Git, GitHub and Gitflow
- FreeRTOS
- Microcontrollers (ARM and Blackfin)
- Embedded Linux OS (Yocto or Raspbian)
- Wireless Communications: ZigBee, BLE, RFID.
- Communication protocols: MQTT, REST APIs or TCP/IP
- C/C++, Rust, OOP, crosscompiling.

Technical Skills

Programming.

- Advanced knowledge on **C/C++**. OOP, Templates y Design Pattern implementation.
- Beginner knowledge on **Rust** programming language.
- Experience with following C/C++ libraries:
 - **Qt 5.4** for basic GUI and data plotting.
 - **OpenCV** for Image processing or matrix operations.
- Experience with **VHDL** for **FPGAs**
- Experience with Crosscompilations and build systems such as **Make** and **GCC toolchain**
- Experience with **Matlab** for:
 - Systems Simulations and Control Systems
 - HIL Systems Simulations (Hardware In the Loop)
- UNIX shell and BASH tools for scripting (sed, awk, grep, etc).

CAD Tools.

- Experience with PCB design tools: **Altium** and **KiCAD**
- Advanced experience with parametric 3D CAD **FreeCAD**
- Experience with 3D printing: **Cura**.

Qualifications

2019 **Electronic Engineer, Universidad Tecnológica Nacional - FRBA, Buenos Aires.**

Languages

Spanish, mother tongue.

English, advanced.

French, basic.

Prior Experience

CITEDEF, Defense Department

2016 - March 2017 **Scholarship**, *Digital Technics Lab.*, Applied Electronics Department, Villa Martelli - Buenos Aires.

Project: Argentinian Air Target - Ground Segment

Objectives: Develop a low cost resynchronization platform for telemetric payloads coming from an Unmanned Aerial Vehicle.

Keywords: FPGA, VHDL, DSP, HIL, Simulation.

Facultad Regional Buenos Aires - Tenaris

2014 - 2018 **Intern**, *Science, Technology and Production Secretary*, UTN-FRBA.

Project: Field-Joint-Coating

Objectives: Develop an electronic system capable of heating large copper weaves with a temperature profile to weld plastic surfaces.

Keywords: PID Controller, Power Electronics, DSP, Electronic Front End.

CITEDEF, Defense Department

2011 - 2013 **Intern**, *Pyrotechnics Lab.*, Applied Chemistry Department.

Project: TINoC (Tornillo Iniciador Normalizado Codificado) [Translates to: Normalized Codified Fire-Started]

Objectives: Develop a safe communication protocol for a microcontroller to trigger the initialization sequence for solid-fuel rockets only after the correct code is entered.

Keywords: ARM, C, Crosscompilation, Linux

College Activity

Teaching

2017 - 2019 **Auxiliary**, *Control Systems*, Facultad Regional Buenos Aires - UTN.

Head professor: Sp. Emilio Ciccolella

Subjects: Systems modeling, Controllers design, Modern Control.

2014 - 2018 **Auxiliary**, *Programming I*, Facultad Regional Buenos Aires - UTN.

Head professor: Eng. Mariana Prieto Canalejo

Subjects: C programming language under GNU/Linux environments.

Awards and Special Mentions

2010 **Projects Fair**, *UTN-FRBA*.

Project: Three Axis CNC Controller

Category: Assignments

Award: Third Place

2017 **Innovar Fair**, *Ministry for Science and Technology*.

Project: Autonomous Navigation Platform

Category: Innovative Product and Design