

Felipe Nicolás Diniello

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Current Job

Nobleo Technology

Aug. 2022 -

Eindhoven - Netherlands

Position: Software Engineer

Duties:

Felipe performs as a developer for external and internal clients projects. For internal assignments he has been aiding in the architecture development for an IoT Platform focused in the Real Time Communications between Edge Devices.

As a developer for external clients he has been working in projects related to dynamic networking in mobile environments, and CAN Bus diagnostics in robotics. *Used tools:*

- STM32 microcontrollers
- Docker
- Embedded Linux OS (Yocto and Buildroot)
- C/C++, Makefile, CMake for cross-compiling.
- GTest and CTest

Technical Skills

Programming Languages

- Proficient with **C/C++11**. OOP, Templates and Design Pattern implementation.
- Experience with **Rust** programming language.
- Experience with Crosscompilations and build systems such as **Make** and **GCC toolchain**
- UNIX shell and **BASH** tools for scripting (sed, awk, grep, etc).

Cybersecurity Tools and Technologies

- Experience using **GPG** tools for encrypting and decrypting files, verifying digital signatures.
- Experience using **LUKS** tools for managing encrypted volumes
- Experience using **SSH** tunnels to securely tunnel traffic between remote and local ports.
- Skilled using **OpenSSL** for conducting certificate checks and troubleshooting certificate-related issues.

Cloud and IoT

Worked with and developed solutions using the following **Azure** modules:

- Device Provisioning Service
- IoT Hub
- IoT Edge

Operative Systems

- Long term experience using and setting **GNU/Linux** environments
- Package management, building and dependency control with **.deb/.rpm** tools
- Experience using **Buildroot** and **Yocto**
- Experience developing under **FreeRTOS**

DevOps Tools and Technologies

- Experience working and setting up CI/CD for custom targets with **Jenkins**
- Usage of **Docker** for setting up custom toolchains for cross-compilation

Qualifications

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

Languages

Spanish, *native*

English, *advanced*

French, *basic*

Prior Experience

Globant - Argentina

- 2017 - 2022 **Internet of Things Studio**, *Capital Federal Buenos Aires*
Position: IoT Edge Engineer (SME.)
Team size: 20 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 and OSs
Keywords: Azure, C++, Jenkins, DSP, Docker, Yocto, MQTT

CITEDEF, Defense Department

- 2016 - 2017 **Digital Technics Lab.**, *Applied Electronics Department, Villa Martelli - Buenos Aires*
Project: Argentinian Air Target - Ground Segment
Position: Paid Internship
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 **Science, Technology and Production Secretary**, *UTN-FRBA*
Project: Field-Joint-Coating
Position: Paid Internship
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 **Pyrotechnics Lab.**, *Applied Chemistry Department*
Project: TINoC (Tornillo Iniciador Normalizado Codificado)
[Translates to: Normalized Codified Fire-Started]
Position: Paid Internship
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: Practical Assignments
Award: Third Place
- 2017 **Innovar Fair**, *Ministry for Science and Technology*
Project: Autonomous Navigation Platform
Category: Innovative Product and Design