# Franck Parat | Embedded Software Engineer

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## Skills

**Key programming skills**: C, Python 2/3, Rust, VHDL (FPGA)

**Embedded engineering**: UART, SPI, CAN (FD), LIN, K-Line, I$^2$C, Ethernet, HAL, Drivers

**Hardware**: Debugging, usage of oscilloscope, soldering, reading of schematics and datasheets

**Also**: C++, Linux, Assembly, Bash, Batch, Docker, Latex

**Tools**: Versionning (Git, SVN), Testing (Ceedling, pytest), Documentation (Sphinx), "Unix" utilities

## Experience

**ART Logics**                                                                                    **Shanghai**

*Automotive Testing Industry, Embedded Software Engineer*                                         *2014–2020*

Worked on the logic implementation of key products of the company.

○ Responsible of the embedded software of a generic test controller. (SPC56/58 (PowerPC), PIC24):
  - Design, implement, test, and document new features,
  - Refactored the code with a strict hardware abstraction layer for portability accross different hardware,
  - Integrated automatic unit testing and documentation generation in the development workflow.
○ Develop and maintain FPGA logic implementations (Xilinx Spartan 6):
  - Bug fixes and stabilization of boards in production,
  - Logic design and implementation for several new products.
○ Developed the firmware of smaller products based on PIC24, with LIN and UART interfaces.
○ Created a GUI tool for controlling the products with UART/Ethernet. Based on Python and wxWidgets.
○ Developed a desktop application for the calibration of several products. Based on Python and Tkinter.

## Education

**National University of Singapore (NUS)**                                                        **Singapore**

*Exchange program*                                                                               *2013–2014*

Exchange program for 2 semesters (Embedded Systems, Computer Science, Multimedia)

**École Nationale Supérieure de l'Électronique et de ses Applications (ENSEA)**                    **Cergy**

*Engineer degree (master level)*                                                                 *2011–2014*

Graduate School of Electrical Engineering and Computer Science

**Lycée Saint-Louis**                                                                             **Paris**

*"Classe Préparatoire aux Grandes Ecoles"*                                                       *2009–2011*

MPSI, PSI: Advanced Mathematics, Physics and Engineering Science

## Languages

**French**: Mother tongue                                    **Chinese (mandarin)**: Conversational

**English**: Fluent. TOEIC: 930, TOEFL: 93