# Franck Parat | Embedded Software Engineer

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## Engineering skills

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

**Embedded engineering**: UART, SPI, CAN, LIN, K-Line, I$^2$C, ADC, DAC, timers, interrupts, HAL

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

**Also**: C++, Assembly, Java, Javascript, Typescript (Angular), Batch, Latex

**Tools**: Git, Subversion, Ceedling (test framework for C), Sphinx (documentation), "Unix" utilities

## Experience

**ART Logics**                                                                           **Shanghai**
*Automotive Testing Industry, Embedded Software Engineer*                                *2014–2018*
Worked on the logic implementation of key products of the company.
- Maintainer of the TCU/CCU firmwares, core products of the company (SPC56, PIC24):
    - Design and implementation of new features.
    - Port the code to the sibling product CCU100, and the successor TCU110;
    - Refactoring of the code for supporting multiple products with a single codebase.
    - Integrated unit testing and documentation generation in the workflow.
- Development and maintenance of FPGA "firmwares" (Xilinx Spartan 6):
    - Bug fixes and stabilization of boards in production;
    - Design and development of several boards.
- Design and development of smaller products based on PIC24, with LIN and UART interfaces.
- Creation of a desktop application for UART or Ethernet communication. Based on Python and wxWidgets.
- Development of a desktop application for the calibration of several products. Based on Python and Tkinter.

## Education

**National University of Singapore**                                                     **Singapore**
*Exchange program*                                                                      *2013–2014*
Exchange program for 2 semesters (Embedded Systems, Computer Science, Multimedia)

**ENSEA**                                                                                **Cergy**
*Engineer degree (master level)*                                                        *2011–2014*
Graduate School of Electrical Engineering and Computer Science

**Lycee 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