Pierre-Louis TILAK

Embedded System Engineer

Contact

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Languages

French : Mothertongue
English : Fluent
TOEIC : 925 pts
Spanish : Academic Level

Programming Skills

C, CPP
♥ Python,
Docker, YML,
Javascript,
HTML,

Hardware & Computer

Embedded Linux

Software

Vim, Git/GitLab,
Docker, Latex, MS Office

Other

Project Management :
Agile, Scrum

Interest

RC Models Design and build RC Gliders and Airplanes
Music Guitar
Sport Paragliding, Climbing, Ski, MountainBike

Education

2010–2014 **Master of engineering** — Institut National des Sciences Appliquées, Toulouse
Automatic Control and Electronics
- Real-time control
- Electronic circuit design
- Low Level Programming : Drivers, STM32
- Critical Embedded System Programming : SCADE
- Real Time OS, JAVA, Android

2013 **Exchange Semester *Thailand*** — Chulanlongkorn University, Bangkok
Information and Communication Engineering : Universal and Technical English skill refining, Embedded System, Arduino Development, Multimedia Engineering

Experiences

2015-2018 **Delair *Developper in Autopilot team*** — Toulouse
Embedded System Engineer
- C Programming on microcontroller : Sensor interface, Drivers, Communication protocols.
- Control Laws for Brushelss Gimbal : Kalman filtering, Brushless model control, FOC control
- Python engineering tools : GUI for experiment and log analysis (PyQT, Matplotlib, Dash & Plotly), Scripts to communicate (TCP, Serial Port), Web request, Unitary Tests and Continuious integration (Behave)
- Implementation of Developpement Environnement : Cross-compilation toolchain (arm-gcc, make), Continious Integration with GitLab Runners : Create docker images (build, complete test environement with simulator) Automatic release package generation and versionning (Gitlab Pipeline, JFrog Artifactory)
- CPP Programming on embedded linux : Drone sensor configuration, Thread and IPC (Linux Signals, SharedMemory, ZMQ, ...)

2014 **SCLE SFE *3 months internship*** — Toulouse
Test plan development : JTAG Boundary Scan (XJTAG Software)
- Test code for SoC (Ethernet, SPI, I2C, Serial, Watchdog ...)
- Design and make interface boards for test bench

2012 **Polymont Subcontractor of Airbus *Operating Method Writer*** — Toulouse
Writing operating method for maintenance on Iron-bird Airbus A330, A320 and A380

Personal Projects

2016 **OpenSource Cocktail Machine**
Design and build a cocktail machine (Team of three engineers)
- CAD Model with Onshape.com
- Hardware development : Electronic board to interface Raspberry/ESP8266 and stepper motors
- Software development : Python webserver and lowlevel code for Raspberry, Lua webserver and low level interface for ESP8266
- HTML, CSS, CherryPy, NodeMCU framework on ESP8266

2018 **OpenSource Paragliding Variometer GPS and SD logger (IGC)**
Design and build a paragliding variometer GPS
- Autonomous Variometer (Source Code - CAD Model and Interface with a Kobo eReader Source Code - CAD Model)
- Kalman Filtering, Optimise memory and time execution, CAD modeling, 3D printing