David **TOCAVEN**

Automatic master's degree student

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French

Education

2015 to present — **EEA master's degree,** *Paul Sabatier University, Toulouse.*

2013–2015 — **Electronic, Electronic engineering and automatic Bachelor's degree,** *Paul Sabatier University, Toulouse.*

2010–2013 — **Scientific stream Baccalaureate** (equivalent to Hight School diploma)**,** *La Borde Basse Hight School, Castres.*

Work Experience

Apr. to Aug. 2018 (5 months) — **Research internship,** *LAAS-CNRS, Toulouse.* Active diagnostic, hybrid system, RRA, observer, parity space

2016–2017 (4 weeks) — **Internship,** *LAAS-CNRS, Toulouse.* DEVS model, discrete time, discrete events, modelling

2016–2017 (6 months) — **Master project,** *Paul Sabatier University, Toulouse.* Scientific method, automaton, project management, Matlab

2016–2017 (5 weeks) — **Internship,** *LAPLACE, Toulouse.* Optic, digital image processing, thermal science, Matlab, LaTeX, Discovering the research world

2016 to present — **Private lesson,** *Toulouse.* Teaching, mathematics, automatic, visualization

Skills

Automatic control – discrete and continuous time

- **Modelling :** frequency, state space, linear and non linear, linear multiple input-output, of observer, uncertain, of late system.
- **Analysis :** frequency, Lyapunov theory, performance, linear and non-linear system, uncertain system, robustness, stability of late system.
- **Control :** PID, multiple input-output, robust, Full state feedback, late system

Automatic control – Discrete events systems

- Automaton,
- Petri network (standard, stochastic, timed),
- $(max, +)$ algebra,
- DEVS models,
- control
- Analysis, simulation, implementation,
- Diagnosers and controllability,
- Language,
- Supervised control,

Implementation :

- **Computer science :** System modelling (UML, UML2, SysML, embedded systems), object-oriented, parallel (mutual exclusion, synchronisation, thread, multitasking.).
- **Industrial computing :** DSP *notions*, Microcontroller *basics*,
- **Real time :** OSEK/VDX standard, scheduling, RTOS, requirement checking, reactivity.
- **Network :** Internet *basics*, Network Calculus, CAN, AFDX, real time network.

Software skills :

For automatic **Matlab** : Simulink, OOP, GUI, RTW.
For computer science : **Eclipse**,**Git**, **Doxygen**.
Office software : **TeXmaker**, **Microsoft office suite**, **free Office suite**.

Languages :

Matlab *good knowledge*, **LaTeX** *good knowledge*, **C** *good knowledge*, **Assembler** *notion*, **VHDL** *good foundation*, **ST** and **IL-LIST** *notion*, **Arduino** *good foundation*, **Java** *basics*, **C++** *notion*.

Language and communication skills :

- **Langue :** French (mother tongue), English
- **Communication :** oral and written in French and English.
- **Project management :** Gantt, WBS, RACI, Agile.

- Personal interests :

 scientific watch

 Travels

 Do-it-yourself (bike trailer, electronic, . . .)