David **TOCAVEN**

Automatic master's degree student

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French
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▶ Education

2015 – 2017 **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 :** State space, linear and non linear, linear multiple input-output, uncertain, time delays system.
- **Analysis :** frequency, temporal (linear and non-linear), Lyapunov theory, performance, uncertain system, robustness, stability of times delays system.
- **Control :** PID, multiple input-output, robust, Observer based state feedback, late system

▶ Automatic control – Discrete events systems

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

▶ 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, . . .)