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French
Driver's licence

# David **TOCAVEN**

*Automatic master's degree student*

## ▶ Education

| | |
|---|---|
| 2015 – 2017 | **EEA master's degree**<br>*Paul Sabatier University Toulouse* |
| 2013 – 2015 | **Electronic, Electronic engineering and automatic Bachelor's degree**<br>*Paul Sabatier University Toulouse* |
| 2010 – 2013 | **Scientific stream Baccalaureate**<br>(equivalent to Hight School diploma)<br>*La Borde Basse Hight School Castres* |

## ▶ Work Experience

| | |
|---|---|
| Apr. to Aug. 2018<br>(5 months) | **Research internship,** *LAAS-CNRS,Toulouse*<br>Active diagnostic, hybrid system, observer, parity space |
| 2016–2017<br>(4 weeks) | **Research internship,** *LAAS-CNRS,Toulouse*<br>DEVS model, discrete time, discrete events, modelling |
| 2016 – 2017<br>(6 months) | **Master project,** *Paul Sabatier University, Toulouse*<br>Scientific method, automaton, project management, Matlab |
| 2016 – 2017<br>(5 weeks) | **Research internship,** *LAPLACE,Toulouse*<br>Optic, digital image processing, thermal science, Matlab, LaTeX, Discovering the research world |
| 2016 to present | **Private lesson,** *Toulouse*<br>Mathematics and automatic,<br>Teaching skills and mathematical 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

- **Modelling :** Automaton, Petri net (standard, stochastic, timed), $(max, +)$ algebra, Discrete EVent Specification (DEVS), Language
- **Analysis :** Cyclicity, controlability, diagnosability, determinism, coverage tree, marked and recognized language
- **Control and diagnostic :** Supervised control, diagnoser, observer
- **Implementation :** Test, simulation, C, VHDL and ST implementations, Oriented object approach

### ▶ 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

- **Language :** 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, . . . )