# JEAN-MICHEL DAIGNAN

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# **Summary**

- Junior engineer, wishing to work in the digital sector (IOT and data science),
- Master's degree in engineering with energy expertise,
- 3+ years working experience of which 11 months abroad (Canada, England),
- Bilingual: English (TOEIC 875) & French (mother tongue), notions of Spanish,
- Experienced in data analysis, Python, MATLAB/SciLab
- Working knowledge of:
  - Programming languages: C/C++, JAVA, HTML/PHP/JavaScript, R,
  - o Database management: **SQL, influxdb, No SQL**,
  - Others: Solidworks, LabVIEW.
- Driver's license: full, clean.

# Work experience

### Actual-Jul16

## **EDF Energy (Hove, England)**



Data scientist, EDF Energy R&D, Digital Innovation Team

<u>Project</u>: Develop the activities of EDF Energy around the use of data for the Business and the Research & Development departments (Development of Virtual Data Lab activities).

#### Specific accomplishments:

- Collect and analyse the data from connected devices and customers (use of API, Data Science),
- Use of services to manage and analyse the data (Amazon Web Services, IBM Bluemix, Tableau, Dataiku DSS),
- Development of proofs of concept to resolve customer's and employee's problematics (Bots, Alexa skill, monitoring dashboard).

#### Dec14-Jun16

#### CEA INES (Le Bourget du Lac, France)



**Research Engineer, LITEN/DTS, Building and Energy Management Department** Supervisor: Arnaud Jay (contact: arnaud.jay@cea.fr)

<u>Project</u>: Research project on **smart building and energy efficiency** thematics.

### Specific accomplishments:

- Development of monitoring systems to measure the indoor/outdoor parameters and the electrical/water consumption in the building (Linux, Raspberry Pi, Arduino),
- Conception of tools to analyse the data collected with Python/SciLab (Machine Learning),
- Patent writing (patent is currently in the assessment process).

#### Nov14-Jun14

### **Unigrid Solutions (Marseille, France)**



Research Engineer

Supervisor: Jean-Charles Félix (contact: jcfmedical@gmail.com)
Project: Development of building management systems.

#### Specific accomplishments:

- Development of a predictive tool to estimate the water consumption of a building,
- Integration of indoor measurement systems (temperature, humidity and CO<sub>2</sub> level) and electricity meter for buildings with ModBus protocol.

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#### Aug13-Feb13



### **CSTB Sophia Antipolis (Sophia Antipolis, France)**

Research Engineer, Renewable Energies Department

Supervisor: Charly Gay (contact: charly.gay@cstb.fr)

<u>Project</u>: Development of **a tool to simulate the electrical consumption** according to different areas (building, district) with **MATLAB**.

#### Specific accomplishments:

- Generation of activities profiles after analysis from survey data (Data mining, Data analysis),
- Development of different load curve models for each appliance in the building,
- Simulation of electrical consumption profiles according to different buildings in the area.

# Aug12-May12

## Dalhousie University (Halifax (NS), Canada)



Research Assistant, Physics building

Supervisor: Laurent Kreplak (contact: lr416839@dal.ca)

Project: Gelation of cellulose nanocrystals in solution due to ionic currents.

#### Specific accomplishments:

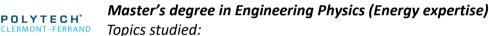
- Use of specific measuring instruments (SAXS, XRD, Raman spectroscopy),
- Research on the physical and chemical properties of the deposit,
- Article writing.

<u>Publication:</u> "Patterning of Nanocrystalline Cellulose Gel Phase by Electrodissolution of a Metallic Electrode" on PlosOne.

# Education

### 2013-2008

# **Polytech Clermont-Ferrand (Clermont-Ferrand, France)**



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- THEORETICAL PHYSICS
- ELECTRICAL ENGINEERING
- CONCEPTION

- Materials Science
- ENERGY MANAGEMENT AND PRODUCTION
- PROJECT MANAGEMENT

### 2010-2008

## **Blaise Pascal University (Clermont-Ferrand, France)**



**Physics Major degree** 

During this degree, some special courses have been done to integrate Polytech Clermont-Ferrand at the end.

Topics studied:

- Mechanics
- ENERGY/THERMAL

- Quantum Physics
- PROGRAMMING LANGUAGES

#### Interests

#### **Interests**

Practiced a lot of sports during my scholarship experiences including basketball, rugby, american football and hand ball.

#### **Community life**

Member of the association CUSTED/IDP ingénierie (2010/2012), our **students' association** which does **research work for industrial partners** who entrust us with studies on various subjects. In charge of the legal aspects.

I am currently a member of a Fablab in Brighton (Build Brighton).

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