

# 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**,
  - 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**

**Project:** 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](mailto:arnaud.jay@cea.fr))

**Project:** 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](mailto: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**.

Aug13-Feb13



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

**Research Engineer, Renewable Energies Department**

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

Project: 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.**

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

## Education

2013-2008



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

**Master's degree in Engineering Physics (Energy expertise)**

Topics studied:

- |                                 |   |
|---------------------------------|---|
| ▪ <b>THEORETICAL PHYSICS</b>    | ▪ <b>MATERIALS SCIENCE</b>                |
| ▪ <b>ELECTRICAL ENGINEERING</b> | ▪ <b>ENERGY MANAGEMENT AND PRODUCTION</b> |
| ▪ <b>CONCEPTION</b>             | ▪ <b>PROJECT MANAGEMENT</b>               |

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:

- |                         |                                |
|-------------------------|--------------------------------|
| ▪ <b>MECHANICS</b>      | ▪ <b>QUANTUM PHYSICS</b>       |
| ▪ <b>ENERGY/THERMAL</b> | ▪ <b>PROGRAMMING LANGUAGES</b> |

## Interests

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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).