# FÉLIX DEFRANCE
## Software engineer

## i INFORMATIONS

- 23 years old
- B driving licence
- Gif-sur-Yvette

## CONTACT

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- LinkedIn
- Website

## </> SKILLS

**Python**

**Java**

**C/C++, Rust**

**Haskell**

**Matlab, R, Arduino**

**Web (JS, React, PHP, SQL, mongoDB, AWS, Azure)**

**Assembly (x86, MIPS and ARM)**

**GNU/Linux (Debian, Arch), bash, vim, docker, LATEX**

**Git, Github Actions**

## 🎓 EDUCATION

**Chalmers University of Technology**
Aug 2020 → Jan 2021

### Academic exchange semester
- **Artificial neural networks**: Recurrent nets, supervised/non supervised/reinforcement learning, Machine Learning, Deep Learning, Python / Tensorflow / Keras.
- **Computer Artchitecture**: CPU architecture, MIPS assembly, Tomasulo's algorithm, optimization techniques, memory hierarchy, multithreading/multiprocessing.
- **Functionnal programming with Haskell**: Data structures, recursion, polymorphism, tests, lazy evaluations, monads.
- **Cryptography**: Symmetric key cryptography, block and stream ciphers, modes of operations, MAC, public key cryptography, PKI, number/group theory, attacks and protocols vulnerabilities.

**ISEP**
(Institut Supérieur d'Electronique de Paris)
2018 → 2021

### Engineer cycle, specialization in Software Engineering
- **3rd year** : *Algorithmic project*: Exploitation of GTFS data from the Rome transport network ; *Cyber Security Project*: web application attacks (XSS, CSRF, SQL injection, DoS/DDoS, flooding) ; *Web project*: design of a web platform with auth, chat (MVC architecture, NodeJS, ReactJS, Redux, WebSockets, SQLite), Agile methodology, Gantt/Pert diagram, unit tests ; *Artificial intelligence project*: analysis of COVID-19's first data, data cleaning, classification and estimation; *Participation in a Tech for Good project*: creation of personas, customer journey map and mockups for the Chronic Buddy project (association to improve the mobility of people with chronic illnesses).
- **2nd year**: *Home automation project*: Home management site (HTML, CSS, JS, PHP), and sensors (TI card) secured by a sound key (filtering, signal processing using MATLAB) ; KingDomino game in Java.

**ISEP**
(Institut Supérieur d'Electronique de Paris)
2016 → 2018

### Associated preparatory cycle Maths and Physics
- **Personal Project 1**: Program simulating the operation of the Enigma machine (in Python) and its physical realisation.
- **Personal Project 2**: Machine resolving the Rubik's cube (Python for GUI and image recognition, and Arduino for engine control).

**Lycée de la Vallée de Chevreuse**
2013 → 2016

### Scientific Baccalaureate (Mathematics speciality, European Class, with Honours)

## 👥 WORK EXPERIENCE

**IRT SystemX**
(territories digital transformation accelerator)
2021 (6 months)

### Data science and full-stack web dev internship
- Analysis, integration and exploitation of data in an interactive application for territorial energy planning
- **Stack**: ReactJS, Redux, Redux Saga, Mapbox GL, Azure (Fonctions (Node JS), Cosmos DB, Data Explorer, Digital Twins, Static Web App), PostgreSQL, Python, Github Actions CI/CD.

**Hello Watt**
(individual's energy advisor)
2019 (6 mois)

### Full-stack developer R&D internship
- Design and development of the energy diagnostic platform, SEO optimisations (structured data).
- **Stack**: Python (Django), ReactJS, AWS (Elastic Beanstalk, Lambda, S3, Cloudwatch), MySQL, mongoDB.

**Hackathons**
Since 2017

### Member of the ISEP hackathon team
- Participation in several competitions: IEEE Xtreme (185th world team, 3rd French team), Battle dev (400th out of 3000), Nuit de l'info (1st prize for the geospatial satellite data recovery and processing challenge), Vivatech.
- Participation in FOSDEM 2019/2020 (Free and Open source Software Developers' European Meeting).

**Partoo**
(improvement of visibility on internet)
2017 (1 month)

### R&D internship
- Creation of an internal web interface to facilitate the retrieval of customer files from the database by the "customer success" team.
- **Stack**: Python (Pyramid), Javascript, mongoDB, Redis.

**IBC New York**
(transport company)
2016 (1 month)

### Highschool internship : computer support

## 💬 LANGUAGES

- French : Native
- English : Fluent (TOEIC : 965/990, CAE)
- Spanish : Intermediate
- Japanese : Beginner

## ⚖ AREAS OF INTEREST

Nature · Mountains · Cycling · Diving

Running · Basketball · Guitar · Cinema