# Software Developer

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My professional experience as a software engineer spans across research, sports, and energy sectors, working with both public and private organizations.

My expertise includes robust API development, and I am the author of:  
[FastAPI Cookbook (Packt Publisher)](https://www.packtpub.com/en-us/product/fastapi-cookbook-9781805127857?srsltid=AfmBOopt6p399x2HciBtj_Vs5v8ig3OuYNKHrNGJFRJuIHx8Kfkl9jnh).

Actively engaged in the tech community, I participate as a speaker at major conferences across Europe, such as [PyCon Portugal 2025](https://2025.pycon.pt/talks/schedule/) and [PyCon Poland 2025](https://www.linkedin.com/posts/pycon-pl_if-you-want-to-refactor-messy-code-into-clean-activity-7341141775777943552-CxuM?utm_source=share&utm_medium=member_desktop&rcm=ACoAABJV5s0BQdHw0R4oPMXyNp7mDJUGbExidyA).

Chek my latest public project at [RAG powered chatbot](https://github.com/giunio-prc/RAG-Powered-Chatbot), live at [rag.avenueit.be](https://rag.avenueit.be)

## Skills

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| * Clean-code, Clean Archi * Test-driven development * OOP * Design Patterns * SOLID principles | * Python * JavaScript * Cloud Computing * Docker * Terraform | * Git best practices * Dev-Ops * Concurrency programming * Cross OS development * HTML, JavaScript and CSS |

## Working Experience

### 06/2024 – 07/2025 FUll stack developer Engie SA Linkebeek, Belgium - Contract

Engie SA is French big corporate in the energy field and part of CAC40 stock index.

I joined the Research & Innovation division in Flanders region in Belgium to develop company applications and provide IT support to researchers. In this role accomplished the following tasks:

* Supporting and guiding data scientists in deploying ML models from Notebooks to packaging
* Develop and maintain a complete application (backend in FastAPI, frontend in React, geospatial data with xarray, numpy and pandas, and MongoDB for data storing)
* Introducing test driven development on the frontend with vitest
* Setup team cookiecutter templates to streamline delivery process and development
* Handling stakeholder communication

### 01/2025 – 06/2025 python Coach (part time), tekno Family Brussels, Belgium

Tekno Family is a charity organization that promotes coding education programs to teenagers who grew up in difficult Brussels neighborhoods.

I was coach for the afterwork course Data Science with Python (30 hours)

### 03/2024 – 06/2024 Technical Author, Packt Publisher copyright contract

Packt Publisher is a major editor and e-learning provider in the tech industry worldwide. I have been the author of the book “**FastAPI Cookbook**”. The cookbook aims to be a reference for developers that need to build robust applications with **Python** to support high traffic interactions.

It covers all the knowledge required by a back-end developer to deliver modern, secure and efficient API.

Some of the recipes cover:

* connecting applications to SQL (**SQLite** **Postgres**) and NoSQL (MongoDB) databases.
* Securing endpoints with OAuth2**.**
* Benchmarking and profiling FastAPI applications.
* Exposing **LLM** models and RAG LLM applications.
* Setting up Websocket and securing practices.

The book is available on the major stores here is the [AWS Link](https://www.amazon.com/FastAPI-Cookbook-Develop-high-performance-applications-ebook/dp/B0D7VKC9TH).

The book has earned top rankings in several BookAuthority organization lists, including:

[3rd in Best FastAPI Books of all time](https://bookauthority.org/books/best-fastapi-books), [5th New Api Development Book](https://bookauthority.org/books/new-api-development-ebooks)

### 04/2023 – 03/2024 Python Developer, Coreso Brussels, Belgium - Contract

Coreso is one of the regional coordination centers for European Transmission System Operators, responsible for the Southwestern Europe borders.

I joined the Internal Software Development (ISD) team to work on the development of web applications to support energy trade operators in their daily work.

In this role, I accomplished the following task:

* test-driven development (pytest dependency injection and test parametrization)
* Setup Integration testing.
* Event driven programming (Kafka).
* Setting up Database management with **Postgres.**
* Backend development with FastAPI (Django-like framework for backend).
* Basic Front-end development with Vue JS, Javascript, HTML and CSS.

### 10/2022 - 03/2023 Python SWE Gorilla Antwerpen, Belgium – Full Time

Gorilla is developing a data-driven platform for energy retailers.  
The company aims to empower energy retailers with solutions for pricing, forecasting, and reporting.

I joined the team to contribute to the back-end API of their SaaS platform.

In this role, I executed the following tasks:

* defining features for the back-end API (Python) with in-house framework
* Managing database migrations with alembic library.
* Refactoring and improving legacy code.

### 09/2020 - 09/2022 Python SWE, Royal Belgian Football Association Belgium

Royal Belgian Football Association is the governing body of football in Belgium.  
As a Software Engineer within the organization, I worked on several cloud-based projects.  
One of the projects I contributed to the development of the backend of the official [app](https://play.google.com/store/apps/details?id=be.rbfa&hl=en).

Overall, I carried on with the following tasks (partial list):

* Implement comprehensive testing, including unit tests, integration tests with pytest and Behave, and performance analysis to guarantee software quality and performance.
* Design, develop and deploy data ingestion pipeline solutions to select the national team.
* Guide and mentor 5 internships to drive skills transfer and growth.

During my period working at RBFA, I contributed to winning the [2021 UEFA GROW AWARDS](https://www.rbfa.be/en/news/rbfa-wins-prizes-2021-uefa-grow-awards) for the digital strategy, awarded by Louis Figo.

### 11/2015 - 06/2020 Researcher, Laboratoire EM2C Gif-sur-Yvette, France

The EM2C laboratory, a CNRS (National Center for Scientific Research) unit and a laboratory of CentraleSupélec, combines academic research with applied studies in the fields of transportation and energy.  
I have been hired to work on the [Clean-gas project](http://www.clean-gas.polimi.it) of the European Commission.

During my work, I carried out the following main tasks:

* Model and implement combustion phenomena in **HPC** parallel code using **Fortran90** and OpenMPI
* Develop data pipelines in Python to handle remote h5 databases, utilizing **Python** libraries such as **Pandas**, **NumPy**, **Matplotlib**, **SciPy**

The work culminated in a published manuscript, which can be found at the following [link](https://theses.hal.science/tel-03347525).

## Education

#### **PhD**

Doctor in Energetics, Specialisation in Combustion Simulation

**École CentraleSupélec, Gif-sur-Yvette, France**

*Graduation 06/2021*

#### **Post-graduate research master**

Numerical and Environmental Fluid Dynamics

**Von Karman Institute, Sint-Genesius-Rode, Belgium**

Graduation 06/2015

#### **Master degree**

Industrial Engineering

**University of Basilicata, Potenza, Italy**

Graduation 04/2014

#### **Professional Training course for executives**

Java and JEE

**Inti Formation, Paris, France**

October to December 2019

## Certifications

*Kubernetes and Cloud Native Associate 05/2023*

*Google Cloud Certified Professional Security Engineer 03/2023  
Google Cloud Certified Professional Network Engineer 02/2023  
Google Cloud Certified Associate Engineer* 04/2021

## Spoken Languages

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| English | fluent |
| French | bilingual |
| Italian | native speaker |
| Dutch | basic knowledge |