

# Juan B. Pedro

## Software Engineer

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### Juan Bautista Pedro Costa

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### Skills

Lifelong and fast learner  
Doer and deep worker  
System designer and builder  
Startup experience

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### Experience

#### Programming Languages

Python (6 years)  
Javascript (5 years)  
C++ (4 years)

#### Frontend

HTML, CSS (5 years)  
React, NextJS (5 years)  
Svelte (4 years)

#### Backend

FastAPI (4 years)  
Pytest (4 years)  
MongoDB, Redis (4 years)  
Firebase (2 years)  
Node, Express (1 year)

#### Cloud

Azure (1 year)  
OVH (2 year)

#### DevOps

Git (6 years)  
Docker (4 years)

#### Machine Learning

Pytorch (5 years)  
Pytorch Lightning  
Scikit-Learn (4 years)  
Tensorflow, Keras  
Numpy, Pandas, Matplotlib

#### Languages

Spanish (native)  
Catalan (native)  
English (C2)  
French (B1)

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I love to build intelligent systems that can solve real world problems and leverage new business opportunities. From the system design, implementation and deployment at scale, I work with the entire stack.

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### EarthPulse, Co-Founder & CTO

2020-Today, Barcelona

Technical Director of EarthPulse, a startup working in the intersection of Artificial Intelligence and Earth Observation. Designed and implemented backend and frontend products and AI models for satellite image processing.

### Universitat de Vic, Associate Professor

2020, Vic (Barcelona)

Professor of the Deep Learning for Diagnosis Decision Support Systems and Pattern Recognition with Machine learning classes of the Biomedical Engineering Degree.

### Starlab, Full Stack Software Engineer

2018-2019, Barcelona

Responsible for the POINTOUT project and contributor to the GREENDEX product. Front and backend development and AI models for satellite image processing.

### Termofluids, Software Engineer & Researcher

2013-2017, Terrassa (Barcelona)

Implemented a module for simulating turbulent compressible fluids into the Termofluids code.

### Centre Tecnològic de Transferència de Calor, Research internship

2011-2013, Terrassa (Barcelona)

Research on the numerical simulation of turbulent compressible flows.

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## Projects

Online education  
Content creation

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### **Sensio Coders**, Online education

2020-Today, Barcelona

Software development blog, Youtube channel and Discord community. <https://sensiocoders.com/>

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## Education

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### **Universitat Politècnica de Catalunya**, PhD in

Aeronautical Engineering

2013-2017, Terrassa (Barcelona)

**Universitat Politècnica de València**, MsC in Artificial Intelligence, Pattern Recognition and Computer Graphics.

2017-2018, València

**Universitat Politècnica de Catalunya**, Aeronautical Engineering

2018-2013, Terrassa (Barcelona)

**Skylab Coders**, Full Stack Web Development

2018, Barcelona

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## Publications

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***Convolutional neural network MRI segmentation for fast optimization of transcranial electrical current stimulation of human brain***

2020

<https://www.biorxiv.org/content/10.1101/2020.01.29.924985v1>

***Solving Partial Differential Equations with Neural Networks***

2019

<https://arxiv.org/abs/1912.04737>

***On the Numerical Simulations of Compressible Flows***

2019

<https://upcommons.upc.edu/handle/2117/134627>