NICOLAS DEJAX

Python Developer | Data Engineer

French, 35 years old

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ABOUT ME

I am currently seeking opportunities with a focus on ethical sectors.

While Python development constitutes my primary skill set, my main strength lies in my ability to adapt quickly to any new environment, fueled by my passion for learning new technologies and methods. This enables me to offer my services across a wide range of fields.

Therefore, feel free to contact me if you think you have a project that fits my interests. I would be happy to discuss it with vou

LANGUAGES

Native French **English** Proficient Spanish Proficient

SKILLS

python bash c/c++ cmake matlab docker gitlab CI/CD ansible Qt / PyQt FastAPI flask django xarray javascript typescript angular 7 HTML / CSS SQL opency

EDUCATION

Master - Signal Processing **2014**

Signal Imaging and Applications Audio/Video processing

Master - Electronic

Electronic of embedded systems and telecommunication

INTEREST



Music Theory, Piano, Guitar



Running, Badminton, Tennis, Hiking



DIY, Renovation



Reading



Popularization of science: Social psychology, Fundamental of physics, Mathematics, etc...

EMPLOYMENT

Python Developer

Sancare

- Enhancing system architecture with microservices using Flask API, SQL Models and RabbitMQ messaging
- Applying DevOps practices with GitLab CI/CD, Docker, Ansible, and bash scripting
- Design & Integration of new features for ongoing product innovation
- Providing support by debugging issues and implementing hot fixes

Altimeter/Geospatial Data Engineer

CLS (CELAD subcontractor)

- Extraction of the instrumental altimeter parameters (Filter and PTR)
- Design & Implementation of a pipeline for the generation of netcdf products
- Study of the performance of conventional altimeter in hydrology (estimation of river height)

Image Processing Engineer

Continental (CELAD subcontractor)

11/2019 - 11/2020

- · Study of the performance driver monitoring system: face detector, gaze and eyes measurements, drowsiness detection.
- Implementation of new algorithms in an existing software in C++ / Qt
- State of the art / Implementation / Comparison of various deep learning models (body pose models, head pose models, pedestrian detection models)

Full-Stack Developer, R&D Audio processing

Entrepreneur

10/2017 - 10/2019

Creation of a algorithm to extract the score from a recorded sound and integration in a web application.

- Creation of a python library and C++ library
- Implementation & Deployment:
 - Desktop app (Python + PyQt)
 - Web app (backend: Django REST API, frontend: Angular 7)
- · Server configuration from scratch using Apache
- Score format: MusicXML and MIDI

Altimeter/Geospatial Data Engineer CLS (Scalian subcontractor)

- · Implementation of an iceberg detection method
- Comparison of altimetry measurements on rivers using conventional altimeters and SAR (Delay/Doppler) altimeters.
- Recovering wind speed (Sigma0) using GNSS Reflectometry
- · Validation of an algorithm to calculate the slope along track on ice measurements and provide a correction accordingly.

(All works detailed above include validation studies followed by the writing of report and/or presentation in English/French)

R&D / Radar Systems Engineer

Météo France

2013

10/2014 - 12/2015

- Programming a weather radar data simulator
- Optimization of radar frequencies (Band S / C / X)
- Optimization of Doppler velocity unfolding algorithms
- Implementation of Triple-PRT Doppler filtering methods (ground filtering)
- Creating a GUI (C++/Qt) application bringing together optimization tools
- Participation at the American Meteorological Society (AMS) radar conference in Norman, OK, USA (poster link)