Jean Nassar

Python & Robotics Expert
with 10+ years of experience

+32 499 41 28 47
jn.masasin@gmail.com
jnassar.com
masasin
masasin
32M, Canadian
Master of Engineering

Summary	I'm a senior engineer with 10+ years of multidisciplinary experience. I focus on software development and hardware interfacing, but I am also strong in mechanical design, data science, and web dev.
Availability	Available from 1 September 2023. EU Blue Card holder.
Certifications	Driving license (BE 2018), Society of Mechanical Engineers (JP 2017)

Work experience

Jan 2020– Present

Senior Software Developer, *Adimian*, Brussels, Belgium
- Took end-to-end project responsibility, including initial design, development, deployment, and maintenance
- Developed and maintained a variety of Python applications, including a web-based data management system and a data processing pipeline
- Utilized Python libraries like Pydantic, FastAPI, SqlAlchemy, and Redis for backend development and Vue for frontend tasks
- Efficiently addressed bug reports and managed releases, maintaining high-standard deliverables
- Leveraged tutoring experience to mentor colleagues, helping them improve their skills and on-board new team members, to high praise

Dec 2019– Aug 2020

Senior Python Developer, *Yields.io*, Brussels, Belgium
- Served as the primary Python developer, working on the platform core
- Refactored and stabilized the codebase, added tests, fixed bugs, and developed new features
- Worked on automatically migrating and testing client code and artifacts with version increases, and deprecated old features
- Moved integration tests away from depending on mocks into tests that worked with a deployed Docker environment

Mar–Oct 2019

Industrial Automation Engineer, *Kapernikov*, Brussels, Belgium
- Developed a conveyor belt monitoring system using Python 3 and ROS
- Used a laser profiler and camera for object identification and created a 3D representation of the conveyor belt
- Detected potentially disruptive objects in real time and produced visualizations for the client's video management system
- Fixed C++ bugs and created a standalone ROS node for the camera

Feb–Dec 2018

Data Scientist/Python Developer, *Sentiance*, Antwerp, Belgium
- Moved the company's codebase from Python 2 to Python 3
- Refactored core functionality into more modular components
- Verified and built machine learning models in numpy and scikit-learn
- Used pyspark to parallelize code execution, or to add new functionality
- Created several docker containers and docker-compose files to automate environment setup and teardown
- Worked on standardizing DevPI index contents using Pipenv

Projects

SPIRIT	Masters thesis project: third-person view for a monocular UAV

- Created a system that superimposed a CGI version of a drone on top of an actual image taken by its FPV camera earlier
- Designed, conducted, and analyzed user studies which showed a large improvement in many metrics, even with 2 Hz transmission

Yozakura	Software development lead for a teleoperated rescue robot

- Developed client-server system for robot control: programmed Raspberry Pi and mbed chips, including servo and sensor drivers
- The code was robust against failure and well-documented, including automatic correction of operator errors

Open Source Projects	Big believer in Open Source: Two packages on PyPI, many repositories on github, and contributions to other projects

- latexipy (129 stars) for exporting Matplotlib-based plots into native LaTeX, this résumé (118 stars), AoC 2021 and 2022, and more
- Contributions to major and minor open source projects, including numpy, ROS, and more

Education

2014–2017	**MEng**, **Mechanical Engineering**, *Kyoto University*, Mechatronics Laboratory, Kyoto, Japan

- Thesis: A UAV Teleoperation System Using Subimposed Past Images
- Tutored Python and software development best practices
- Worked on gestural controls for robots

2008–2013	**BASc**, **Honours Mechatronics Engineering**, *University of Waterloo*, Waterloo, ON, Canada

- Completed six co-op internships in three countries
- Cofounded the Engineering Ambassador program
- Directed the UW EngSoc Mental Health Awareness directorship
- Taught Japanese with the UW Culture and Language Exchange Club

Technical skills

Languages	Python (incl. scipy, pandas, pytest, sklearn), Javascript, C++, bash
Packages	Jupyter, Streamlit, FastAPI, Pydantic, Vue, SQLAlchemy, Redis
Dev tools	Poetry, Git, Docker, CI/CD, documentation (Sphinx, mkdocs), LLMs
Robotics	ROS stack, RPi, ESP8266, Arduino, mbed, MicroPython
Electromech.	Solidworks, Inventor, OpenSCAD, machining, PCB design, soldering
Miscellaneous	Gimp, Inkscape; Linux, macOS X, Windows; Office suites

Languages

Native	English, French, Lebanese
Fluent	Japanese, Arabic
Intermediate	Dutch, Spanish
Beginner	German, Italian, Krio, Other