# Jean Nassar

*10+ YOE Python & Robotics*
*and a passion for AI*

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*34M, Canadian*
*Master of Engineering*

Summary — As a senior engineer with 10+ years of multidisciplinary experience, I enjoy interfacing with hardware, and am strong in data science and backend development. I am passionate about AI.

## Work experience

Sep 2023– Jun 2025 — **Senior Software Developer**, *Nipro Digital Technologies Europe*, Brugge, Belgium

- Led the end-to-end design and implementation of multiple critical features for the NephroFlow dialysis management application (Ruby on Rails, PostgreSQL), delivering complex modules such as a from-scratch OIDC/LDAP authentication integration
- Engineered key data and reporting solutions, automating the generation of complex regulatory reports by handling numerous edge cases in production data, and implementing the foundational backend architecture for a new analytics dashboard which uses dbt and Cube.js
- Served as the company's subject matter expert on LLMs and their integration, advising colleagues across the company and leading a successful series of exploratory hackathons

Jan 2021– Aug 2023 — **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
- 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

Open Source Projects Two packages on PyPI, many repositories on github, and contributions to other projects such as numpy, ROS, and more
- latexipy (129 stars) for exporting Matplotlib-based plots into native LaTeX, this résumé (118 stars), AoC 2021 and 2022, 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

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

## Technical skills

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|---|---|
| Languages | Python (incl. scientific; pytest), Ruby (incl. Rails), Javascript, C++ |
| Packages | Jupyter, FastAPI, Pydantic, Vue, SQLAlchemy, PostgreSQL, Redis |
| Dev tools | 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

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|---|---|
| Native | English, French, Lebanese |
| Fluent | Japanese, Arabic |
| Intermediate | Dutch, Spanish |