



Di Kiese Patrick

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[Blog](#) · [Mastodon](#) · [Gitlab](#) · [Github](#)

Python software engineer with 15+ years of experience building backend systems, REST APIs, and data pipelines. Passionate about [free and open source software](#), with hands-on devops experience spanning containers, CI/CD, and system administration. Active instructor and public speaker — committed to giving back through teaching and open source contributions.

ME :

Operating systems - GNU/Linux Debian, Ubuntu & derivatives), Fedora, WSL2

Programming languages - [Python](#), Bash, SQL, Lisp, interested in Zig

Databases - Sqlite, Postgresql, DuckDb, Redis

Software development methodologies - Agile, Kanban, Pair programming, Devops, Lean, [ITIL v4](#)

Frameworks & Libraries - [Flask](#), [Django](#), Sqlite, SQLAlchemy, [Mypy](#), [Numpy](#), [Pandas](#), [Streamlit](#)

Toolbelt - Emacs, SSH, [Gitlab-CI](#), [Pytest](#) Git, Make, [AWS](#), [K8s](#), Jenkins, Docker & [more](#)

Spoken languages - French, Lingala, English

Hobbies - Reading, Writing, Journaling, Cooking, Jump rope, Kettlebells, Inline skates, Swimming

EXPERIENCE :

[Institut Pasteur Dakar](#)

Software engineer

August 2023 - Present

Dakar Senegal

- Developed REST APIs for the latest iteration of [4s](#), a syndromic surveillance system that monitors symptom clusters to enable early and faster detection of epidemics and public health events through real-time data analysis.
- Developed REST APIs to streamline data retrieval from 96-well PCR plates (ELISA assays) for the immunology laboratory, implemented patient data mapping systems, and created comprehensive data processing solutions including visualizations, reports, and analytical tables.
- Strengthened data security across the platform's six core services, closing gaps that could have exposed patient records or let unauthorized users access the system.
- Designed and built a unified alert system that reliably notifies health workers of urgent lab results and disease outbreaks by email, replacing inconsistent, service-by-service methods.
- Introduced safeguards against accidental, permanent loss of patient and clinical records, so critical health data can always be recovered.
- Standardized dependency tooling across all six backend services with [uv](#), cutting environment setup time from roughly 2 minutes to under 10 seconds.
- Maintained user guides for every user role of the 4s system, authored with Pandoc & Quarto.

[Dakar Institute of Technology](#)

Programming instructor

Oct 2019 - Aug 2023

Dakar Senegal

- Contributing to building one of the foremost programming [schools](#) in West Africa.
- Designed and developed engaging curriculum [materials](#) tailored to learners with different skill levels.
- Delivered instruction to 200+ scholars from diverse backgrounds across Africa.
- Taught 30+ courses focused on Python programming, databases, version control, unit testing, and REST APIs.
- Assessed student progress through assignments, exams, workshops, and personal projects.
- Organized industry visits to enhance students' understanding of real-world applications.
- Supported students with internship and [job placement](#), in Senegal and Guinea.

Logilab

Oct 2018 - Oct 2021

Software engineer

Remote

- Updated and refreshed the technical documentation for the RQL package.
- Co-authored and reviewed [training](#) materials (courses & exercises) offered by Logilab.
- Conducted weekly pair programming and code review sessions with teammates.
- Led the addition of Python [type annotations](#) to the [RQL package](#).
- Reviewed and migrated internal software components to Python 3 ahead of the [Python 2 sunset](#).

Brief.me

Feb 2018 – June 2018

Software engineer

Remote

- Authored technical documentation and delivered training to end users.
- Integrated payment gateways into the web platforms.
- Optimized back office performance by reducing database query counts and extracting only required fields.
- Maintained and extended the [brief.me](#) & [brief.eco](#) platforms.
- Administered web servers and SSL certificates, and set up monitoring.
- Configured continuous deployment pipelines for all internal projects.

XCG Consulting

Feb 2017 – Jan 2018

Software engineer

Remote

- Designed and implemented feature experiments across the [main Django projects](#), and containerized them with Docker to simplify and accelerate deployment.
- Integrated multiple third-party services (payment gateway, currency rates, monitoring) into in-house Django projects, while providing technical support to end users.

Africafilms.tv

2011 – 2016

Software engineer

Remote

- Developed and maintained the movie catalog and Digital Rights Management (DRM) systems for a Video on Demand platform focused on African cinema.
- Built the payment gateway integration and the financial distribution engine handling revenue splitting among stakeholders.

FREE AND OPEN SOURCE SOFTWARE CONTRIBUTIONS

[I think](#), the ability to access, modify, and distribute software freely not only fosters innovation but also promotes collaboration and knowledge sharing within the community. [I also think](#), whenever I can, I should contribute back to free and open source software. The following are some of the contributions I have done :

- Improved type annotations for some methods inside the [Pandas stubs](#) repository.
- Added translations and attempted to update Github Actions to run even more tests for the [Piccolo admin](#) project
- Added some stubs inside the [Typeshed](#) repository
- Fixed some bugs for the [Healthsites.io](#) project.

EDUCATION

Institut Supérieur d'Informatique (ISI)

Dakar, Sénégal

[Master in software engineering](#), BAC+5

2010

"Les espèces qui cessent d'apprendre et de s'adapter disparaissent." Thomas L. Friedman.