

Luca Iacolettig

PYTHON & DATA DEVELOPER | LLM-BASED SYSTEMS

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PROFILE

Python developer with over four years of practice and nine years of SQL on production databases — PostgreSQL, Oracle and SQL Server — in public transport and municipal services, in Switzerland and Italy. I design and test systems built on language models: structured prompting, controlled output, critical review of the results. I was writing code before the LLMs arrived, and that taught me the one thing that really matters: every model output has to be checked before it is handed over. I have published three books and carried out the technical and scientific review of a manual for a publishing house — on projects where the people who build and the people who use speak different languages, I am usually the bridge.

TECHNICAL SKILLS

Languages	Python · SQL · JavaScript · MATLAB · R · HTML/CSS
Backend & data	Flask · Django · pandas · REST APIs · PostgreSQL · Oracle · Microsoft SQL Server · ETL
AI & LLM	Structured prompting — role, context, constraints, task, examples, output format · design of multi-step conversational flows · systematic evaluation and verification of output · Claude · ChatGPT · DeepLearning.AI prompt engineering course
Tools	Git and GitHub · Docker · Postman · Jupyter · shell and command line · QGIS · Linux · macOS · Windows
Spoken	Italian native · English C1 · German B2 · Spanish A1 · French A1

EXPERIENCE

2025 — present	Independent developer Own projects, Python and LLM-based systems Development of Insurek , a multilingual Flask application, open source and containerised, published online and used by real users. Design of Ophanim , a five-part conversational path guided by a language model and tested on real people. Continuous training: Exercism (Python), prompt engineering, mathematics for data science. Volunteer work at the Caritas social grocery.
2025	Full-Stack Developer (Python) Brainyware Srl Development of REST APIs in Flask. Building of full-stack applications with Python, HTML, CSS and JavaScript. Python scripts for the automation of ETL workflows.
2025	GIS Developer (Python) GeoDataLab Development of a full-stack Django web application. Python algorithm for the bicubic super-resolution of satellite imagery. Research into computer vision techniques.

2022 – 2024	Project Manager – Databases and GIS (SQL) ERZ Entsorgung + Recycling Zürich
Zurich, Switzerland	Administration and development of three databases on three different engines (PostgreSQL, Microsoft SQL Server, Oracle) serving about one hundred internal users. Lead of two Web-GIS projects on the Hexagon platform. JavaScript scripting for data extraction from the DOM.
2022	GIS Intern (Python, SQL) Basler Verkehrs-Betriebe BVB
Basel, Switzerland	Independent development of a Python, SQL and GIS tool that measures the availability of the Basel tram network — the share slowed down or occupied by roadworks — and produces the reports operational decisions are based on. Administration of PostgreSQL and Oracle databases; Hexagon Web-GIS applications.
2017 – 2018	Research Assistant WSL Institute for Snow and Avalanche Research SLF
Davos, Switzerland	Research in snow hydrology; MATLAB programming for the analysis of snowpack data series.

OPEN SOURCE PROJECTS

2025	Insurek
Python, Flask, Docker	A web application in four languages that works out the cheapest Swiss health insurance deductible from the expected medical costs. Try the application - Source code
2022	Tram network availability
Python, SQL, GIS	Analysis of the Basel network from PostgreSQL data and shapefiles, with automatic reporting in matplotlib. Source code

EDUCATION

2022	<u>Geo-Python and Automating GIS processes</u> University of Helsinki
Online	Python programming (OOP, data structures, algorithms), process automation, data analysis.
2017	MSc in Environmental and Land Sciences and Technologies University of Udine · 110/110 <i>cum laude</i>
Udine, Italy	Thesis: a numerical model of avalanche hazard . Relevant coursework: statistics and R programming, SQL database systems. The thesis led to an article in the journal <i>Neve e Valanghe</i> .
2014	BSc in Environmental and Natural Sciences University of Udine · 110/110
Udine, Italy	

WRITING AND OUTREACH

- Three self-published books — *Tutto quello che non so, I Lost My Way* (in English) and *Tutto quello che so*: around two hundred copies distributed, proceeds given to charity.
- Technical and scientific review of the manual *Valanghe — come ridurre il rischio* (Versante Sud) on behalf of the publisher; translation from English into Italian of a doctrinal text; two public talks with audience discussion (2025, 2026).

Three working languages: Italian, English, German; several years of professional experience in Switzerland. Available remotely worldwide and, on site, in the provinces of Udine, Gorizia and Trieste. References on request. I consent to the processing of my personal data under the GDPR (Reg. EU 2016/679).