Quentin Vanderlinden

I am a freelance fullstack software engineer with a strong mathematics background and data science experience. I am currently targeting projects in Next.js fullstack development, more backend-focused, DevOps, and data engineering. I am also a mathematics enthusiast who loves solving challenging problems using algorithms and data processing.

Working Experience

Automation Engineer (freelance)
May. 2024 - January 2025

Cebir, Kortenberg

I automated an internal process that computes test takings statistics and generated detailed reports. This process used to be performed by employees and often took several weeks to complete. Their process was split into several sub-processes and they had to perform lots of copy pasting of both code and data resulting from a sub-process to adapt the rest of the chain. The automation I developed eliminated the need for such manual interactions, hence eliminating the risk of human error and drastically reducing the computation time to a few minutes by using appropriate tools.

Python   Airflow   Polars   python-docx   openpyxl

Fullstack Software Engineer (freelance)
Jan. 2024 - May 2024

Enobase, Brussels

I helped a friend on his startup idea while looking for my next mission. I developed in-house tooling to detect changes made to a declarative database schema specified in code in order to automatically generate TypeScript-based database migrations.

TypeScript   Postgres   Kysely

Fullstack Software Engineer (freelance)
Oct. 2022 - Dec. 2023

Embie, Brussels

I helped digitalizing the subsidies processes for a client of Embie by developing a brand new web platform where citizens/companies can issue subsidies requests for their projects abroad and track their status throughout the project lifecycle. The platform also enables the client agents to review the requests, ask for modifications, and perform many other administrative tasks.

In addition to my technical role, I also provided some guidance on following an agile way of working and coaching to more junior developers.

React   Next.js   TypeScript   tRPC   State machine   GraphQL   Docker   Kubernetes   Github Actions   Keycloak

Fullstack Software Engineer (freelance)
Jan. 2019 - Oct. 2022

IMEC, Leuven

At first, I worked on several prototyping projects related to smart cities and developed in-house tooling to enable them. The projects were developed for research purposes and their ultimate goal was to empower decision makers and citizen with map visualizations displaying sensor data to make informed decisions.

Then, I joined the Digital Twin team where I focused more on backend development and I developed and maintained a variety of micro-services, discovered event streams processing with Kafka, touched on DevOps, learned infrastructure as code, etc.

Details

Belgian, single

Born May 14, 1991

Petite Corniche 9, 5340 Gesves

Contact

quentin.vanderlinden@gmail.com

+32 (0) 478 03 57 28

Languages

French (native)

English (fluent)

Dutch (basics)

Hobbies

Sports (cycling, triathlon, padel)

Watching TV shows and YouTube videos

Listening to music

Miscellaneous

2x Ironman 70.3 finisher & 1x Ironman finisher

3rd place at the Math Matters, Apply It ! applied mathematics awareness campaign for a vulgarisation paper on special effects

For the last few months, I worked on a data science project related to urban mobility to better understand how pedestrians, cyclists and cars move in flemish cities. The findings could then be used to improve the city mobility infrastructure and/or predict the influence of closing particular roads on neighboring streets. I was involved in all the steps of the project, namely data acquisition (static datasets and scraping web APIs), data transformation and cleansing, modelling (a convex optimization program based on dynamics equations), model validation and output interpretation.

TypeScript   React   Redux   Redux-Saga   Mapbox   Deck.gl   GraphQL   Kafka   Docker
Kubernetes   Azure DevOps   Terraform   Python   Pandas   OSQP

Fullstack Software Engineer   *Nov. 2016 - Jan. 2019*

The Great Circle, Rixensart

I spent most of my time developing frontend web applications, whose main purposes were to assist sailors in their decision making (ranging from amateurs to professionals). I also developed a few backend services to pair with our frontends, played with or designed algorithms when the occasion arose and implemented data retrieval/manipulation pipelines to integrate new weather data sources within our backend infrastructure.

React   Redux   Mapbox   Electron   Node.js   Express.js   TypeScript   Linux   Heroku

Associate Consultant   *Oct. 2015 - Nov. 2016*

Computer Sciences Corporation, Zaventem

I worked as a data scientist for the Big Data & Analytics department. For the majority of my employment there, I worked on a business intelligence project for one of the top players in the insurance industry in Belgium, for whom we built a data warehouse using the data vault architecture. My role was mainly maintenance but I also had the chance to implement a few ETL workflows. The rest of my time was split on several smaller projects where I used Python and QGIS to perform location intelligence.

Google Maps Platform   Python   SQL   QGIS

Education

M.Sc. in Applied Mathematics, magna cum laude   *2013-2015*

Université Catholique de Louvain, Louvain-la-Neuve

This master revolves around using mathematical models to solve complex interdisciplinary engineering problems. Students learn how to solve these problems through training in mathematical modelling, simulation and optimization. More specifically (but not exhaustively), I followed courses where mathematical models and simulations were applied to finance, machine learning, epidemiology, quantitative energy economics, tsunami dynamics, etc.

My master's thesis was called "Structure Mining in Complex Networks", and was supervised by Jean-Charles Delvenne. In that context, I designed 3 optimization algorithms based on modularity maximization to perform fuzzy community detection. Then, I compared them with state of the art algorithms on battle-tested benchmarks.

Python   C   Java   MATLAB   LaTeX   AMPL