AURÉLIEN VERMYLEN

Full Stack Developer

E-mail:
aurelien.vermylen@gmail.com

Phone:
+32 497 74 91 12

FR – NL – EN

PROFILE

At the start of my career, I worked for large financial institutions and acquired extensive experience in coding statistical and mathematical models. Through the years, I developed a passion for computers, software and tech. Since I never shied away from solving hard technical problems, I acquired excellent skills in delivering performant and stable analytics applications.

EXPERIENCE

DATA SCIENTIST

Proximus 2020

- Extraction and analysis of relevant mobility data from a big data system that holds the Proximus location data of the cellular network.
- SQL or Python processing of the rough location data in order to answer specific client questions and needs.
- Presentation on client sites of results and data.
- Setting up automatized and encrypted data transfers through complex firewall and network security layers.

IT QUANTITATIVE DEVELOPER

Engie 2018-2019

- Development of pricers for optional power products in c# library
- Improvement of the commodity price simulator: porting python 2 code to python 3, introducing dependency management, source control and testing
- Set up APIs with pythonnet and Flask to allow real-time querying, set up periodic and on-demand (web) usages
- Support on web and networking related issues with existing applications in R-shiny.

CTO

ClearRoad 2017

- Develop a POC application on ClearRoad's existing transaction processor in python, crossbar.io and Flask.
- Develop a car tracking system for mile-based invoicing with ODBII devices, a python stack (erp5), python scientific libraries and an openstreetmap database.

QUANTITATIVE ANALYST

BNP Paribas Fortis 2015-2016

- Review counterparty credit risk models within the BNP Paribas trading book.
- Use and implement statistical and applied mathematics techniques: regression, optimization, maximum likelihood, symbolic mathematics software, linear algebra, etc.
- Develop in the team's C++ library or in ad-hoc python scripts.

QUANTITATIVE DEVELOPER

Dexia/Belfius 2011-2014

- Development on the VaR (Value-at-Risk) system in java.
- Develop various risk models and computations in Matlab and Excel + VBA.

SKILLS

TECHNOLOGIES

Python – Linux – git – pandas – javascript – postgres – networking – C/C++ – C# – Java

PRODUCTS

Jupyter – Airflow – Hadoop – Excel – R – Rstudio – rpy2 – pythonnet – Flask – SQLAlchemy – Wordpress – Azure – Apache/Nginx – crossbario – PostGIS – Openstreetmap – Shapely

DATA SCIENCE

Optimization (BFGS, NCG, Nelder-Mead) - Statistics (Regressions, Maximum Likelihood, Copulas) - Financial mathematics (Ito, Merton, Black, HJM, Vasicek, SABR) - Machine Learning (Convolutional NN, XGboost, decision trees)

EDUCATION

MASTER FINANCIAL MANAGEMENT

Vlerick Business School (2009-2010)

Corporate Finance – Valuation - Strategic Management - Cost Accounting - Financial Accounting.

MASTER IN CIVIL ENGINEERING

Université Catholique de Louvain (2004-2009)

Signal Processing - Financial Mathematics – Optimization - Numerical Analysis - Discrete Mathematics - Neural Networks