

Sebastiaan Vermeulen *January 6, 1992*

me@sebastiaanvermeulen.nl • +31 6 51 656 206 • www.sebastiaanvermeulen.nl
Zilvergracht 29 • 2652HT Berkel en Rodenrijs • Netherlands

Summary

Accomplished data scientist that takes initiative, can rally stakeholders and decision makers and drive a team to deliver. I have strong technical skills spanning the breadth of statistics and data science related topics. I have extensive experience communicating technical results clearly to less technical audiences using their own frame of reference.

Experience

Source.ag

AMSTERDAM

Senior data scientist

Jan '22 – present

- *Predict harvest size, weight and fruit weight so produce can be sold at more favorable prices on the futures market.*

I identified key issues in our approach, designed a new solution, garnered support from my leads and convinced the management team to pivot our approach to the product. Borrowing expertise from product teams all over the company we created a taskforce to build out the new solution. I spearhead the taskforce together with a product manager and a sponsor from the management team. In this role I manage various stakeholders, including some contracted work, legal, customers, product, and the engineering team.

- *Model plant growth and fruit development so growers can dynamically optimize their crop strategy through simulations.*

I led the design of the simulation engine between the engineering team and the data science team, amongst others balancing R&D speed against deployment and maintenance cost in our solution. I oversee and execute on the continued improvement of the used models. I coached and mentored 3 juniors on this project. I coordinate with the sales and marketing teams on the sales messaging, turning quantitative results into a clear message for our non-technical prospects.

Econometric Institute and Tinbergen Institute

ROTTERDAM

PhD Candidate

Aug '17 – Dec '21

Regulation and governance principles prevent widespread adoption of machine learning techniques in the financial domain because of the black box nature of these methods: I used the properties responsible for the superior performance of machine learning methods to create interpretable models with similar or better performance than their black box counterparts.

- Improved the methodology of deep feedforward neural networks for faster training
- Formulated a radial basis function network with similar interpretability as linear models
- Orchestrated efficient training of custom 100.000+ parameter models on 25Gb datasets on high-performance compute nodes

I supervised students in writing their Bachelor's and Master's theses, providing technical guidance as well as coaching some of them in their professional development.

Ortec Finance

ROTTERDAM

Data scientist/Engineer

Sep '16 – Aug '17

As a member of the EFIS team I was responsible for the integrity and continuous improvement of the models Ortec Finance employs.

- Designed a unified data pipeline for the modeling team to share results, eliminating discrepancies resulting from misaligned dataset versions.
- Designed and created a data pipeline to streamline access to subscribed 3d party data sources. Access rights were managed via Kerberos. Interfaces included a REST API, Python API and Excel integration via a custom plug-in.
- Redesigned, refactored and optimized the core data pipeline, reducing a monthly 2 workday workflow to a 15 minute workflow. Automated outlier detection and report generation, ported Gauss code and 'Excel code' to Python and C#.

I had ownership over the first 2 pipelines.

Erasmus University

ROTTERDAM

Research assistant

Sep '16 – Aug '17

Continuing my thesis research on stochastic optimization under the guidance of prof. dr. Patrick Groenen. I proposed a stochastic implementation of majorization, a fast and stable optimization algorithm for nondifferentiable functions. My stochastic variant enables large-scale application.

Promedico

Business Analyst

UTRECHT
Oct '15 – Aug '16

Providing quantitative insights to the department of sales, finance and management.

- Organized a revision of the pricing system to one that is more risk-neutral under supply-side price fluctuations and saves 20% on the administrative workload.
- Deployed dashboards to give department heads real-time insight in the performance of their department.
- Developed managerial tools to gain more control over the budget and to extend the traditional management accounting tools.

Oxolutions

Software engineer

ROTTERDAM
Feb '14 – Mar '16

Designing tailor-made software solutions in process automation.

- Skateboarded the use of 3D-scanning technology to enhance customer experience in online retail.
- Automated projects for multiple large organizations.
- Designed a light-weight online algorithm for embedded statistical inference, providing personalized PoS marketing.

Miscellaneous

2013–2014 Freelance maths tutor

2010–2013 Stage building and design

2010–2014 Freelance IT support

2009–2010 Deckhand on the Bark Europa (Antarctics and Atlantic Ocean)

2008–2009 Assistant chef in 't Oude Stadthuys

Open source contributions

Pandas, Numpy, Numpy, Optimize, Diesel

Education

Erasmus University Rotterdam

ROTTERDAM, THE NETHERLANDS

Msc Quantitative Finance

2016 – 2017

Statistics, Stochastic differential equations, Non-linear optimization, some Operations Research and some online optimization. 8.8

Erasmus University Rotterdam

ROTTERDAM, THE NETHERLANDS

Bsc Econometrics

2013 – 2016

Cum laude

University of Amsterdam

AMSTERDAM, THE NETHERLANDS

Bsc Mathematics

2014 – 2016

Cum laude

Skills

Data science: Statistical modeling, simulation analysis, bayesian methods, deep learning. Extensive experience with time series. Tools: SKlearn, statsmodels, LightGBM, XGBoost, JAX, Tensorflow, PyTorch, Plotly, Matplotlib, OpenCV

Programming (decreasing order of familiarity): Python, SQL, Rust, Go, C#, Java, JavaScript, C(++), Cython, Haskell, Pascal, R, PHP, and many more that I've only used for 1 or 2 projects.

Technical: Git, CI/CD, AWS and a little Azure, bash

Natural languages: Dutch (*native*), English (*fluent*).

Miscellaneous

2021 Organizing committee DSSV-ECDA2021 Conference

2019 Presented at EIPC2019

2018 Organizing committee EIPC2018

2017 Participated in the Dutch Blockchain Hackathon

2015 Organised a business presentation of Ortec Finance for second-year mathematics students

2014 Risbo Training: Basic Didactics

2007 Participant of the Model European Parliament

Interests

Non-exhaustive and in alphabetical order: Archery, Biking, Bouldering, Cooking, Fitness, Running, Sailing