



Mario van Rooij

Software Engineer

- February 27, 1998
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- mariovanrooij@hotmail.com
- Dutch

Software Skills

- C
- Python
- React
- Java
- Docker
- SQL/Mongo
- FastAPI

Social Network

- [Github Profile](#)

Languages

- Dutch
- English
- German

About me

As a graduate with an MSc in Computational Science and a BSc in Physics, I have a solid foundation in computational methods, mathematics, and software engineering. My career has focused on defense-related fields, demonstrating my strong problem-solving skills. I also bring solid software experience from various ventures, and I am highly experienced in .NET. I am passionate about contributing to defense and security innovations, combining my technical skills with an interest in national security.

Working Experience

- May 2024 – Now **Software engineer** DroneNet
Worked on creating a simulation environment for simulated drones. Create post flight analysis.
- April 2023 – Now **Quantitative Risk Analyst** ABN-AMRO
Risk modelling for mortgages. Developing credit risk models. Implementing risk models on Databricks, using spark, databricks, ML-flow.
- Jan 2023 – December 2023 **Software Engineer** Merwylan - Immobilienplanet
Creating C-sharp application to create brochures for real estate. Product users could upload information of a house and generate an automatic report.
- Oktober 2022 – December 2022 **Software Engineer** Avalor AI
Working on military drone applications. Writing tracking algorithms, apps to control drones, working with GIS systems.
- Jan 2021 – July 2023 **Software Engineer** MyWonderTales
Creating generative AI application that creates books based on an input story, including relevant images, including physical books.
- December 2021 – August 2022 **Thesis Intern** TNO, Intelligent Imaging
Worked on privacy concerns in federated learning and developed my own method, which was later published in an article. Worked with deep learning, compute clusters.

Education

Exchanges

- 2019 – 2020 **Erasmus Exchange Semester** Humboldt University of Berlin
Followed computational physics course, in combination with solid state physics course. Also learned German.

Study

- 2020 – 2022 **Master Studies Computational Science (Cum Laude)** University of Amsterdam
Complex System Simulation, Numerical Algorithms, Agent-based Modelling, Evolutionary Computing, Large Scale Data Engineering, Stochastic Simulation, Scientific Computing, Advanced Numerical Methods in Many Body Physics, Machine Learning for Physics and Astronomy, Programming Multi-core and Many-core Systems, Uncertainty Quantification
- 2017 – 2020 **Bachelor Studies Physics and Astronomy** University of Amsterdam
Calculus, Astrophysics, Condensed matter, Programming for Physics and Astronomy, Research practicum, Theoretical Solid State Physics

Publications/ Other

Paper Link	Secure Sparse Gradient Aggregation in Distributed Architectures <i>Mario van Rooij, Sabina van Rooij, Henri Bouma, Andy Pimentel</i> IoTSMS, 2022
Instagram Link	Founded a Small Company for AI Children's Books <i>MyWonderTales</i> 2023
App Link	Created an App that Matches Music Taste to Events Using Spotify <i>Gatharoo</i> 2023