Wouter Geraedts *March 12, 1990*

contact@woutergeraedts.nl • +31.652657476 • woutergeraedts.nl
Ploegstraat 21 • 6532 AB • Nijmegen • The Netherlands

Summary

A hard worker with a passion for interesting engineering problems. Works both as a standalone freelancer and leads development teams for external companies. Has a strong affinity for beautiful code and correct software.

From his first BASIC program at the age of five (1995) Wouter has been fascinated by automating processes such that boring work is offloaded to the computer. Programming his entire life, he started working for earnest at a small local software company even before attending Computing Science at the Radboud University Nijmegen.

At the university he found two of his other passions: rock climbing and his association of *beta*-friends #RU. Before finishing University he started working as a student assistant and teacher at the same study, performing security audits for a professor, and finally started working at his first long-time employer Tweede golf. At Tweede golf, he has built up the current Kubernetes infrastructure and advocated the use of Rust, making the company one of the first Dutch companies to use the safety- and performance-oriented language in a production setting.

From 2019 onwards Wouter has been a part-time freelancer, whilst also still leading teams at Tweede golf.

Work experience

Lumiguide
NIJMEGEN, THE NETHERLANDS
Freelance developer — *July '20 – present*

Development of a driver for the managed ethernet switch chipset LAN9354. This driver exposes the chips virtual PHY layer to a ESP32-based appliance. During this project I collaborated with team members on a pre-existing hardware design to validate it and move it towards mass production.

SIDN
ARNHEM, THE NETHERLANDS
Freelance developer — *October '19 – June '20*

Worked on two separate projects at SIDN. Firstly implemented an authentication bridge between the IRMA and SAML2 protocols in Java. Secondly I guided the adoption of a proprietary Identity and Access Management solution for all their tools, both internal and external for various programming languages and environments. Worked together with multiple teams to adopt this new solution.

Privacy By Design
NIJMEGEN, THE NETHERLANDS
Freelance developer — *Juli '19 – present*

Independently designed and implemented an encryption scheme for e-mail using Identity Based Encryption and elliptic curves. Core cryptography was written in *core Rust* with zero allocations, memory safety guarantees and constant time execution. I setup core server infrastructure, and provided Proof of Concept applications both for the command-line and in the Thunderbird e-mail client. This work has been presented at various conferences.

Tweede golf
NIJMEGEN, THE NETHERLANDS
Software Engineer — *September '15 – present*

Until July 2019 I have worked full-time at tweede golf as a software engineer, both in the roles as technical developer and project lead in teams consisting of up to four developers. Since then I have worked part-time at tweede golf on select projects. In this time I have worked with various programming languages and advanced the general knowledge base of the company by leading research efforts. Besides programming I've been responsible for system and network operations of our infrastructure, as well as pioneering our use of the programming language Rust, the development of embedded devices, and infrastructure on Kubernetes clusters.

Laboratory for Quality Software
NIJMEGEN, THE NETHERLANDS
Security Auditor — *'15*

As part of the academic spin-off LaQuSo I have performed security penetration tests and assessments for the Dutch government. Most notably I have been involved in several audits of both the mobile apps of *Berichtenbox* and *DigiD* (which provide the digital identity and services to all Dutch citizens and companies), and have been able to provide the client with major security issues by reverse engineering assembly in black-box assessments. Besides performing penetration tests I have delivered clearly written assessment reports detailing issues, assessing their impact and suggesting mitigations.

Radboud University
NIJMEGEN, THE NETHERLANDS
Student Assistent — *'10 – '14*

As a student I was quickly asked to also help teach other students. I have teached or assisted with the courses 'Processors', 'Processes', 'Complexity theory' and 'Algorithms and datastructures'.

Member of the education committee *'10 – '13*

This committee keeps the study computing science in check and facilitates quality control. I have contributed in the management of this committee, as well as implemented various tools and processes that are still being used today around the entire faculty.

Adecon BENEDEN-LEEUWEN, THE NETHERLANDS
Developer *'07 – '11*

As one of the two programmers at the company I was responsible for my own projects, building on and improving on our in-house CMS.

Relevant other experience

RustFest EUROPE
Organizer *'19 – present*

I am one of the main organizers of RustFest 2020, a major European congress for the programming language Rust with a world-wide audience and over 400 attendees.

#RU THE NETHERLANDS
Secretary *'15 – present*

An association comprised of mostly alumni of computer science and beta studies. We organize outings, symposia and get-togethers. As member of the board for the associated foundation I administer and facilitate these activities.

NijSAC NIJMEGEN, THE NETHERLANDS
Introduction committee member *'16 – present*

In my role as a member of the introduction committee I organize trips to climbing areas in Belgium, France and Germany for novice climbers and show them the joys of rock climbing and being outdoors.

Education

Radboud University NIJMEGEN, THE NETHERLANDS
Master degree in Software Science *'13 – '19*

Completed Bene Meritum, with a specialisation in Software Science (compiler construction, embedded software, and software verification), and with an emphasis on the Mathematical Foundation of Computer Science (MFoCS) with courses such as computer algebra, complexity theory and category theory. My thesis concerned formal premise selection using machine learning.

Bachelor degree in Computer Science *'08 – '13*

Completed Bene Meritum, with a minor in Artificial Intelligence. My thesis concerned the formal modelling and verification of flow systems, such as used at ASML. I won the *Aia Bachelor Award* for this thesis.

NKBV (Dutch association for mountaineering) THE NETHERLANDS
Assistant climbing instructor (SKB) *'18 – '19*

I have completed the certification for assistant climbing instructor, allowing me to accompany and when necessary rescue inexperienced climbers.

Skills

General skills heading R&D, project lead, freelancing, teaching, Scrum, sysops of Linux and Kubernetes, developing embedded software and hardware, security penetration testing, compiler construction, software verification, data science, proof construction, linear programming, web scraping

Technical / programming languages: C, C++ (Expert), C#, Rust (Expert), GLPK, Go, Haskell, CUDA, Java, JavaScript, TypeScript, LaTeX, UPPAAL, OCaml, Coq, Clean, LLVM, OpenGL, PHP, Python, Ruby

Platforms: Amazon Web Services, Google Cloud Platform, embedded platforms such as STM32

Persistence: PostgreSQL, Redis, MySQL

Web technology: HTML, CSS, WebGL, Geo-standards like WMS, WMTS, WFS etc., SAML2

Other: Git, SVN, Ansible, Kubernetes

Natural languages: Dutch (*mother tongue*), English (*full professional proficiency*) and Japanese (*beginner*).

Interests

In alphabetical ordering: board games, cooking, electronics, reading fiction (science fiction and fantasy such as Robin Hobb, Peter Hamilton and Isaac Asimov), rock climbing, role playing-games (D&D), space