

Arjan Wooning



Senior software developer (Freelance)

Vraclávek, Czech Republic | arjan@wooning.cz | linkedin.com/in/arjanwooning/

Originally from the Netherlands, I have been living in the Czech Republic since 2011. I am a native Dutch speaker and fluent in English, with expertise in embedded software development, Linux, and a strong background hardware development.

I build high-uptime systems with clean, well-documented, and readable code. My work ranges from C/C++ on devices to Python control logic and backend services coordinating physical assets, such as batteries, inverters, sensors, pumps, and more.

Available for contract and remote engagements.

Professional Experience

Senior Software Developer (Freelance)

Self-employed | Vraclávek, CZ | Aug 2025 — Present

As a freelance Senior Software Developer, I help companies with product development to design and build reliable software solutions. I'm specialized in embedded software and backend development, where I build systems that enable seamless communication between devices and platforms.

Key expertise and deliverables:

- **System Development (Python/C on Linux):** Design and implement robust software systems, primarily utilizing Python and C on Linux environments, with a critical focus on modularity and high performance.
- **Specialization in energy solutions:** Proven capability in delivering specialized software solutions tailored for the complex requirements within the energy solutions sector.
- **Connectivity & Messaging:** Expertise in architecting systems that ensure seamless communication, frequently leveraging MQTT message brokers and building powerful REST APIs for platform-to-device connectivity.
- **Core Competencies:** Focused expertise in embedded software, backend development, implementing detailed monitoring services, and maintaining version control using Git.

Senior Software Developer

Tieto | Ostrava, CZ | Jan 2023 - Jul 2025

- At Tieto, I served as a Senior Software Developer for SOLIDSUN, leading the design and development of a modular Python-based abstraction layer for multi-brand solar inverter connectivity, deployed on Dockerized Raspberry Pi systems with MQTT and Modbus RTU communication.
- I also built a secure, scalable OTA update platform using Eclipse Hawkbit, and optimized ultra-low-power BLE beacon firmware on Nordic hardware using Zephyr RTOS.
- Additionally, I created a Python project template with CI/CD pipelines (GitLab, Tox, Docker), and developed a cloud-integrated energy simulator and controller with Azure IoT Hub support—enabling real-time testing, orchestration, and visualization of virtual energy devices.

Owner

Firm-ware | Vraclávek, CZ | Apr 2006 — Dec 2022

- Through Firm-ware, I provided technical consultancy to small businesses, aiming to elevate their technology and processes to a professional, user-friendly level through targeted solutions. These included VPNs, file servers, email solutions, low-power hardware, snapshot backup servers, VoIP, Linux servers, wireless networking, and offsite backups.
- I designed and built a wide range of software systems, primarily on Linux using Python and C, with a strong focus on modularity and connectivity, frequently utilizing MQTT message brokers.
- Linux is my preferred working environment due to its stability and reliability. My core competencies include embedded software, REST APIs, backend development, monitoring services, and version control with Git.

Software Architect

Imtech Marine & Offshore | Rotterdam, NL | May 2003 - Aug 2011

- At Imtech M&O, I worked on the development of navigation systems aboard specialized vessels, including dredgers, naval ships, and luxury yachts.
- As a team lead managing 4 to 9 developers, I led the development of a complex Electronic Chart Display and Information System (ECDIS) for ship bridges, written in C/C++ with over 800,000 lines of code.
- In addition to team leadership, I served as the Linux specialist responsible for the redundant server infrastructure serving the main bridge systems.

System Analyst / Technical Specialist

KPN Telecom | The Hague, NL | Mar 2000 - Apr 2003

- At KPN, the largest telecommunications company in the Netherlands, I worked within the internal software house on a variety of small and large-scale projects.
- Key contributions included working in international teams to automate the ADSL order processing pipeline using TIBCO, and developing a highthroughput billing data processing platform designed to handle large volumes of telecom usage data efficiently and reliably

Firmware and software engineer

Thales Defence | Zoetermeer, NL | Jan 1997 – Mar 2000

- At Thales Defence, a leading manufacturer in the defense industry, I worked on the development of Link11, a tactical data communication system used by NATO fleets to exchange information over VHF between ships and helicopters.
- My role focused on low-level C development, including writing device drivers and Board Support Packages (BSPs) to enable the VxWorks Real-Time Operating System to run on new custom modem boards.

Product Developer

Adesys BV | Wateringen, NL | Dec 1989 – Jan 1997

- At Adesys, a manufacturer of control and alerting systems for critical business processes, I focused primarily on embedded software development, while also contributing to hardware design.
- I developed software/firmware in C, Assembly, and PLM for Intel 8051 microcontrollers. Additionally, I was involved in prototyping, PCB routing, EMC compliance testing, and on-site field validation, contributing to the full development cycle from concept to production.

Core Skills

- Python
- C / C++
- Linux/Unix specialist
- Hardware development
- (Embedded) software development
- Robust solutions with high-uptime, well documented and cost awareness
- Team-worker, open in communication and open-mindedness
- Long-term thinking
- Focus on results

Education

Object Oriented and Information Technology | The Hague University of Applied Sciences (1998)

Computer Technology | Haagland Techniek, The Hague (1989)

Electronics | Haagland Techniek, The Hague (1988)

Languages

English (Full professional proficiency), **Dutch** (Native)

Certificates

Nordic Semiconductor: nRF Connect SDK Fundamentals & Intermediate

AT Computing certificate: AdvancedUnix Programming

WindRiver certificate VxWorks BoardSupport Packages and device drivers

WindRiver certificate:VxWorks RealTime Programming

Tibco certificates:TIB103, TIB123, TIB523, TIB202, TIB702

Mikrocentrum certificate:PCB Layout and EMC

Twice certificate:Object Oriented Analysis and Design using UML