



Valerii Kozhevets

Software Engineer — embedded & IoT · AI / ML · 3D & geo-data · C# / .NET and Python web

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PROFILE

Second-year HBO-ICT student, with a year of paid industry experience in business-process automation. ESP32/RP2040 firmware and self-designed hardware at one end; C#/.NET and Python web services, 3D/geo-data and applied machine learning at the other. Open to part-time or full-time work.

EXPERIENCE

Software Developer — Steinfort Glas (Glazz), Franeker Feb – Aug 2024

- Retained after the internship on a part-time remote contract to extend the .NET/C# customer portal.
- Rebuilt four portal pages — login, privacy, orders, order detail — in ASP.NET Core MVC, responsive, working to GitHub issues from the lead developer through reviewed feature branches.

Software Development Intern — Steinfort Glas (Glazz), Franeker Sep 2023 – Feb 2024

- Automated business processes with Elfsquad CPQ and DynaMaker; designed and built custom API integrations.
- Built a pipeline that turned a SolaFlex-generated DXF file into a correctly parameterised Elfsquad order automatically.

Python · Flask · C# · ASP.NET Core · SQL · Angular · AJAX · Git

SELECTED PROJECTS

Digital Twin for the Municipality of Leeuwarden 2026

3D urban-planning simulator for the Spoordok district — buildings placed across eight categories with live cost, occupancy, livability and parking metrics; virtual observers capture views that a local vision model scores. CesiumJS, Flask, Ollama, Docker. A second-year module taken in year one; chosen by the municipality as the best project of the cohort.

RC aircraft — airframe, avionics, flight testing 2024

A 1 m foam hand-launch glider rebuilt into a GPS-equipped aircraft: electronics bought, soldered and configured; flown in August 2024. Matek F411-WTE on INAV wired from the bare board — GPS, an ExpressLRS control link, live telemetry downlink, return-to-home as the failsafe. Member of the Dokkumer Modelvliegclub (KNVvL) in 2024.

RC car & self-designed radio controller 2024–2026

A remote-controlled vehicle and the handheld controller built to drive it: shell modelled in Blender and 3D-printed, joystick module, LiPo and an ESP32 T-Display fitted inside, MicroPython firmware in four versions. ESP-NOW peer-to-peer link between controller and vehicle, the receiver on the vehicle does the mixing.

Language model pretrained from scratch → tool-using agent 2023–2025

A multilingual dialogue model built end to end — training corpus gathered by a web crawler written for the job, an own byte-level BPE tokeniser, and pretraining from zero rather than fine-tuning a checkpoint. Text chat, STT and TTS voice control and a function-calling layer driving the desktop; later trained across several machines at once. Small corpus, short runs — the aim was the whole pipeline, not benchmark scores.

EDUCATION

BSc HBO-ICT, Software Engineering at NHL Stenden, Leeuwarden Sep 2025 – present

- Propedeeuse 2026: 60/60 ECTS, average 8.7 — with 10.0 for the IoT project and Computer Architecture.
- Education Committee; chair of student association “Digital Minds”; Scrum Master of a category-winning first-year game team.

MBO-4 Software Developer at Firda, Leeuwarden Aug 2023 – Jun 2025

- Four-year programme completed in two on VABOK IT, the accelerated route Firda runs with NHL Stenden; HBO-competency certificate.
- One of eight national finalists at Skills Heroes 2025 (Software Developer); fifth in the final.
- Unity developer on an educational VR game; taught basic web development to MAVO pupils.
- Scrum Master and AI engineer at an EdTech startup: a Dutch T5 fine-tuned on a synthetic corpus to tag assignment texts by level, programme, year and learning outcome, served in full precision over a Django REST API; int8 PTQ, QAT and head pruning evaluated for CPU inference. Given ten candidate answers it picked the right one 97% of the time for level and 92% for programme.

SKILLS

Programming	Python · MicroPython · C++ · C# / .NET · Java · JavaScript / TypeScript · PHP · SQL · Haskell
Embedded	ESP32 / ESP32-C3 · RP2040 · ESP-NOW · MQTT · I ² C / SPI · LiPo power · sensor telemetry
AI & ML	PyTorch · Pandas · pretraining & fine-tuning · PTQ / QAT · head pruning · model merging · computer vision · RL / RLHF · NLP
3D & CAD	Blender · Instant Meshes · FDM 3D printing · Agisoft Metashape · RealityScan · Meshroom · CesiumJS · Unity · Unreal
Web & data	React · TypeScript · Angular · Flask · ASP.NET · Node/Express · REST APIs · SQLite / MySQL · Docker · Git
Drones & RC	INAV / Betaflight · Matek F411 · airframe build & trim
Languages	Ukrainian · Russian · English (C1) · Dutch (B2)
Certificates	EASA A1/A3 (2023) · 2nd International Humanoid Forum workshop, Biel (2026) · IELTS Academic 8.0

Work status: Temporary Protection Directive — full Dutch labour-market access, no TWV required.