Berkant Üsen

Mechatronic Systems Engineering student

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Mechatronic Systems Engineering student at Hochschule Rhein-Waal, interested in embedded systems, practical engineering and automotive technology. Practical experience includes supervised electrical manufacturing and university AVR coursework connecting hardware, digital logic and C programming.

Education

B.Sc. Mechatronic Systems Engineering

Hochschule Rhein-Waal · Kleve, Germany — Oct 2023-present

Ongoing, English-taught degree. Studies include programming, electronics and project management.

Undergraduate studies in Mechatronics Engineering

Bahçeşehir University · Istanbul, Türkiye — Sep 2022-Jul 2023

First year of undergraduate study before transferring to Hochschule Rhein-Waal.

Technical experience

Electrical manufacturing intern

Onur Elektrik · Istanbul, Türkiye — Mar 2024 / Aug-Sep 2024

Eight weeks across two supervised placements.

- Assisted with measuring, marking, cutting, bending and fitting copper busbars for electrical-panel assemblies.
- Checked assembly fit and alignment; revisited bends with the team when installed components interfered with one another.
- Assembled industrial sockets, fuse-box parts and panel components, including cable preparation and cable-length checks.
- Traced a network connection fault to a cable, replaced it and helped organize the surrounding wiring.

Selected engineering work

AVR digital I/O and Boolean logic

University coursework — Documented Oct 2024

- Worked through an ATmega88PA-targeted C toolchain using avr-gcc, avr-objcopy, Makefiles and avrdude.
- Adapted supplied teaching examples for two-button input and LED output, including AND, NOR and XOR logic.
- Documented build and flash steps and related bit masks and register operations to behavior on the lab board.

Adapted coursework based on teaching examples by Thomas Grunenberg.

Selected engineering work

Personal engineering portfolio

Personal project · AI-assisted implementation 2026

- Define the portfolio's requirements and review content and interactions. Implementation developed with substantial ChatGPT/Codex assistance.
- Connect multilingual project documentation, client-side tools and educational engineering visualizations. Browser demonstrations are new work, separate from historical coursework.

Technical foundations

Programming and embedded systems

C, Java, Python and MATLAB foundations; AVR digital I/O, Boolean logic, Makefiles and basic compile/flash workflows.

Practical and digital tools

Component assembly, busbar fitting, dimensional checks, cable organization and practical troubleshooting. Additional familiarity with computer troubleshooting, v0, Vercel and Firebase.

Languages

Turkish: native · English: fluent, IELTS Academic 8.0 · German: A2

Employment and responsibility

Basketball coach · Paid part-time role

University Sports · Hochschule Rhein-Waal · Kleve, Germany Since summer semester 2025

- Plan and lead training for students with different experience levels; explain drills, give individual feedback and adapt activities to support participation.

Service team member · Part-time

Kochlöffel · Germany 2025-present

- Serve customers and take orders in German; coordinate with colleagues across operational tasks during busy shifts.

Technical translation and practical support

Ansia Metal · Istanbul, Türkiye Occasional

- Support Turkish-English technical communication and assist with supervised practical work.

Supporting activities

University basketball coaching since summer semester 2025, campus event support and personal photography and editing.