Maximilian Köhlenbeck

Automation Engineering student at KUKA and Hochschule Bremen

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FOCUS

Physical AI
Reinforcement learning
Computer vision
Sim2Real

SKILLS

Robotics
ROS 2, MoveIt, RViz2, path planning

Reinforcement learning
Gymnasium, Stable-Baselines3, MuJoCo

Local AI
faster-whisper, Piper TTS, Ollama, ONNX

Software
Python, TypeScript, C#, .NET, Next.js

Tooling
Claude Code, Codex, n8n, Git

EDUCATION

B.Eng. Automation Engineering
Work-study, Hochschule Bremen and KUKA
10/2024 to 12/2027 (expected)

Abitur
Gymnasium Vegesack, Bremen, 2024

LANGUAGES

German (native), English (C1)

As of October 2026

I build AI and robotics systems that have to work in the real world.

CURRENTLY

reBot Arm B601-RS robot arm

• in progress

Training the arm on computer vision and path planning. Real2Sim and Sim2Real.

ROS 2 · MoveIt · RViz2

Sesame Robot

• in progress

Building it and training it with reinforcement learning. From simulation to real hardware.

PROJECTS

Nozzle offset calibration · KUKA

2026

Errors of **a few tenths of a millimeter** showed in printed parts. I made the offset reliably measurable and turned it into a process the team reruns without me.

FDM 3D printing · Calibration · Measurement

One policy, four poses of a double pendulum

09/2026

A TQC policy I trained switches a double pendulum between all four poses. **100 % success** across all 4×4 transitions. Runs live on my website.

MuJoCo · Stable-Baselines3 · TQC · TypeScript

Developer Island · open source

10/2026

A status capsule for the Windows desktop. Idles at **55 MB** and 0.03 % of one CPU core, 382 unit tests.

C# · .NET 10 · WinUI 3 · github.com/maximilian467/Developer-Island

HACKATHONS

Mobile Robotics Hackathon · 1st place

10/2026

CeTI, TU Dresden. Waste sorting with a robot arm and 6D pose estimation.

Hack-Nation 7 · Helpy

10/2026

Smart Region Hackathon Offenburg · Baulify

05/2026

HOW I WORK

I use coding agents like Claude Code and Codex for implementation. My part is the engineering around it: requirements, system design, experiments, debugging and checking that the system actually works.