JONATHAN SCHAAIJ

Robotics Engineer - Mechatronics, Software, Control

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TECH STACK

C · C++ · Java · Rust · Java-Script · Type-Script · Python · SQL · Structured-Text · Matlab · HTML | CSS · KiCAD · Solidworks · Linux · Arduino · RaspberryPi · Git · Svelte · Docker · 3D-Printing · Pinocchio · ROS · NVIM · Tmux

SKILLS

Trajectory Optimization · Systems Engineering · SLAM · Lidar · Computer-Vision · Machine-Learning · FEA · Control Systems

PROJECTS

Home Automation · Ping-Pong-Bouncer 🌐 · Custom-SAFE · Vote-advisor 🌐

LANGUAGES

Dutch: **Native**

English: **Cambridge C2**

German: **Bi-lingual**

ABOUT ME

Passionate about technology and skilled in engineering, I thrive on tackling diverse challenges and expanding my expertise. From web development to embedded PCB design to machine learning, I have a broad range of skills and a knack for quick learning. Outside of work, I enjoy tackling personal projects and volunteer every weekend at scouting. Additionally, I am an adrenaline junkie who finds excitement in climbing and occasionally jumping out of airplanes.

EDUCATION

MSc Robotics | University of Twente

📅 Sept.2022 – Aug. 2024(Expected)   📍 Enschede, Netherlands

- Specialisation: Algorithms and Software AI
- Thesis: "Optimizing robot and actuator design through Co-Design"

For my master thesis I am developing software for optimizing the actuator design of a robot concurrently with the trajectory using Non-Linear-Programming in collaboration with Maxon.

BSc Advanced Technology | University of Twente

📅 Sept.2019 – July.2022   📍 Enschede, Netherlands

- Thesis: "Self-sensing properties of continuous carbon fiber reinforced, 3D-printed beams" 🌐

EXPERIENCE

Project Intern | Rosen

📅 Sept.2023 – Dec.2023   📍 Lingen, Germany

- Grade: 9/10
- Activities: Solidworks, Python, Svelte, FEM, RaspberryPi, I2C

I developed and tested a prototype for an inline waterline repair robot, capable of passing through butterfly valves. The CAD design has been analysed using FEM and 3D-printed using CF-PLA.

Electrical Engineer | Neuenhauser

📅 Jul.2022 – Aug.2023   📍 Neuenhaus, Germany

- Developed and programmed PCB using STM32-F04 for navigation with Lidar sensors
- Programmed remote-control capabilities with controller and web-app for pallet-handling robot
- Added speed-control interface to spooling-machine.

Fullstack Web Developer | Lente Digital

📅 Dec.2022 – Present   📍 Utrecht, Netherlands