


Basic Info

: hendrikjekelwk@gmail.com

: <https://hajekel.github.io/>

: github.com/HAJEKEL


: linkedin.com/in/henk-jekel

Dutch robotics engineer with a passion for control systems, motion planning, ROS, deep learning, and computer vision. Built numerous [projects](#) integrating these fields, seeking a challenging role as a robotics engineer with a focus on innovation and impact. For more information, go to my portfolio website: <https://hajekel.github.io> .

Experience

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|-------------------|---|
| SEP 2023–ONGOING | Robotics Engineer
<i>IamMirte, Delft, Netherlands</i> Part of the team that engineered the MIRTE master robot's software and hardware, significantly enhancing the practical learning experience for robotics students at Delft University.
Technologies: ROS, SSH, X11 forwarding, design, robot dynamics and control. |
| SEP 2023–Nov 2023 | AI System Developer
<i>KLM, Amsterdam, Netherlands</i> Developed and implemented a sophisticated adaptive AI interactive voice response system , demonstrating its feasibility in enhancing sales employee training and contributing to improved training efficiency and effectiveness.
Technologies: Javascript, Python, Twilio, Streaming, HTTP, AWS, OpenAI API. |
| SEP 2023–Nov 2023 | MSc Robotics Teaching Assistant
<i>Delft University, Delft, Netherlands</i> Facilitated the courses 'Robot Dynamics and Control', 'Deep Learning' and 'Multi-disciplinary Project', contributing to curriculum development and providing hands-on guidance.
Technologies: Python, systems and control, arm/vehicle kinematics and dynamics, advanced manipulation. |
| AUG 2021–Nov 2021 | AI Developer
<i>Plaex, Enschede, Netherlands</i> Developed AI algorithms to enhance the accuracy and efficiency of Garby, an innovative automatic waste sorting system.
Technologies: Deep learning, YOLOv4, Mechanical Design. |
| SEP 2019–JUL 2021 | BSc Mechanical Engineering Teaching Assistant
<i>University of Twente, Enschede, Netherlands</i> Provided instructional support in BSc mechanical engineering, enhancing student comprehension and application of mechanical principles through engaging teaching methods and practical demonstrations. |

Education

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|-----------|---|
| 2021–2024 | MSc. in Robotics
<i>Delft University, Delft, Netherlands</i> Specializations in deep learning, computer vision, autonomous flight of micro air vehicles, tele-robotics and haptics, knowledge representation and symbolic reasoning. Thesis: <i>Development and evaluation of visio-verbal teleimpedance interface using eye-tracking and LLMs</i> Literature review:  Supervisor: Luka Peternel . |
| 2021 | Deep Learning Specialization
<i>Online, Coursera</i> |
| 2018–2021 | BSc in Mechanical Engineering
<i>University of Twente, Enschede, Netherlands</i> Specializations in Bio-robotics and Aircraft Engineering |

Languages

HUMAN | Dutch (*fluent*), English (*fluent*), French (*basic*), German (*basic*).

MACHINE | Python (PyTorch, Tensorflow, NumPy), C++, JavaScript, Matlab/GNU Octave, bash/shell, \LaTeX , R Markdown, HTML, CSS.

Awards

2023 | **First Prize for Best AIRLab Robot Design**
Ahold Delheize Delft, Netherlands
First prize for best [AIRLab robot design](#) of the MSc robotics.

- Technologies: ROS, OpenAI, ComputerVision.

Tools I Use

Usual Workflow

I utilize a **vim**-based setup within a tiling window manager (**i3-gaps**). For document compilation, I rely on **Markdown** and **L^AT_EX**, with **biber** for managing references. For multimedia manipulation, I prefer terminal-based tools like **imagemagick** and **ffmpeg** due to their extensibility. For coding, I use **VSCode** as my code editor. My experience spans across various operating systems including **Microsoft**, **MacOS**, and **GNU/Linux** (both **Debian** and **Arch**-based distributions, as well as **Void Linux**).

Programs I'm Familiar With

I am proficient with **tmux**, **ssh**, and have used **Blender** to create complex renders such as an [aircraft model](#). My expertise extends to **SolidWorks**, **Matlab**, and **Jupyter Notebook**. I have managed websites manually via **ssh** and **vim**, using **HTML/CSS/JavaScript**, as well as tools like **GitHub Pages**. Additionally, I am experienced with **ROS** for robotics middleware, **Simulink** for simulation and model-based design, and tools for **Deep Learning and Machine Learning** including **PyTorch** and **TensorFlow**. My skills also include extensive use of **ffmpeg** for video processing and **imagemagick** for image manipulation.

Interests

I teach salsa, bachata and kizomba in the form of weekly courses and workshops to beginner dancers. Visit my [dance portfolio website](#) for more info.