H.A. (Henk) Jekel

Basic Info

✉ : hendrikjekel@gmail.com   ○ : github.com/HAJEKEL

🖃 : https://hajekel.github.io/   in : 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

Sep 2023–Ongoing | **Robotics Engineer**
IamMirte, Delft, Netherlands 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**
KLM, Amsterdam, Netherlands 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**
Delft University, Delft, Netherlands 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**
Plaex, Enschede, Netherlands 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**
University of Twente, Enschede, Netherlands Provided instructional support in BSc mechanical engineering, enhancing student comprehension and application of mechanical principles through engaging teaching methods and practical demonstrations.

Education

2021–2024 | **MSc. in Robotics**
Delft University, Delft, Netherlands Specializations in deep learning, computer vision, autonomous flight of micro air vehicles, tele-robotics and haptics, knowledge representation and symbolic reasoning. Thesis: *Development and evaluation of visio-verbal teleimpedance interface using eye-tracking and LLMs* Literature review: 📄. Supervisor: Luka Peternel.

2021 | **Deep Learning Specialization**
Online, Coursera

2018–2021 | **BSc in Mechanical Engineering**
University of Twente, Enschede, Netherlands 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 LaTeX, 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.