

# Luca Cordes

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Control systems engineer with a strong focus on drone dynamics, embedded systems, and real-time control. Experienced in building and tuning custom drones, designing firmware, and integrating sensors. Passionate about hands-on prototyping and developing reliable autonomous systems.

## EDUCATION

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### University of Padova

Oct. 2024 – Current

*Master of Science in Control Systems Engineering*

Padova, Italy

- **Coursework:** System Theory, Model and Control of Electric Drives, Digital Control, Machine Learning
- **Research:** Participation in the Bosch Future Mobility Challenge

### University of Applied Sciences Darmstadt

Oct. 2019 – Sep. 2024

*Bachelor of Science in Mechatronics*

Darmstadt, Germany

- **Coursework:** PLC programming, Measurements, Static/kinematics, Basic control theory
- **Bachelor Thesis:** Model and control and implementation of an automated string tuner on STM32 with FreeRTOS

### Berufliches Gymnasium Groß Gerau

Sep. 2015 – Sept. 2018

*A level with computer science direction*

Groß Gerau, Germany

- **Coursework:** C# programming, Simple Arduino/Hardware Projects

## EXPERIENCE

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### Adaptive Balancing Power GmbH

Sep. 2023 – June 2024

*Working Student/Internship*

Pfungstadt, Germany

- PCB design to reduce the scaling cost, implementation and testing of various components
- Designed and printed mounting solutions in CAD

### HDMC

Sep. 2021 – July 2022

*Developer*

Darmstadt, Germany

- Developed the hardware and software for an IoT device that reports the occupancy of the disabled spot on a bus
- Implemented embedded C code for a real-time system and managed the device's networking stack

## PROJECTS

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### Drone

- Studying and analyzing modern drone control systems
- Building a custom 5 inch quad, fly style: Acrobatic/Racing, rarely cinematic

### Keyboards

- Interested in keyboards. Designing Hardware/Software for ergonomic keyboards, Unibodysweep 2021
- Combination of disciplines: SMD PCB soldering, 3D printing, firmware compilation, custom layout (colemak), art

### Selfhosting

- Pursuing digital self-sufficiency through encrypted communication and transparent information feeds.
- Testing open-source software and contributing to its communities.

## SKILLS

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**Programming Languages :** Matlab, C/C++, ROS, Python, HTML/CSS, Bash

**Tools :** Simulink/Matlab/Octave, KiCad/EasyEDA, Onshape/Fusion360, Linux, Git,  $\LaTeX$

**Languages :** German (native), English (C2)