

# Peter Werner

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[LinkedIn](#) | [Google Scholar](#)

## EDUCATION

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### Gymnasium and Military Service

Bern and Zürich region

*Gymnasium Kirchenfeld Matura in Physics and applied Mathematics, one year military service* Aug. 2013 – May 2016

### Eidgenössische Technische Hochschule Zürich (ETHZ)

Zürich

*Bachelor in Mechanical and Process Engineering, focus on mechatronics*

Sep. 2016 – May 2020

*Masters in Robotics, Systems and Control, focus on learning and control.*

Sep. 2020 – May 2021

### University of Pennsylvania (UPenn)

Philadelphia

*Exchange Semester at UPenn counting towards my MSc degree at ETHZ.*

Jan. 2020 – May 2020

## PROJECT AND WORK EXPERIENCE

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### Vision-Based Sensing | Python, C++, Computer Vision, Machine Learning

Jan. 2019 – Sep. 2019

- For my Bachelor's Thesis I developed and implemented vision-based proprioceptive sensing for an inflatable linear soft actuator at the Institute for Dynamical Systems and Control (ETHZ).
- I was hired after my thesis to write a paper (as first author) on the results which was published at [IROS 2020](#): [Paper](#), [Video](#)

### Research Assistant | Python, C++, ROS, Optimization, Machine Learning

Sep. 2019 – May 2020

- Modeling of residual dynamics of VoliroX drone using Gaussian Process Regression and Locally Weighted Projection Regression at the Autonomous Systems Lab (ETHZ). My work included the implementation of an optimization based compensation scheme to reduce the effects of the residual dynamics.
- Implementation of a model predictive contouring controller for autonomous racing on the F1TENTH platform at mLab, UPenn: [Github](#)

### Undergraduate Teaching Assistant

Sep. 2018 – May 2019

- Held weekly recitations for courses in Mechanics, Dynamics and Quantum Mechanics for roughly 30 students
- Was selected as one of the best TAs for Quantum Mechanics and asked to hold an exam preparation course

## TECHNICAL SKILLS

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**Languages:** Python, C/C++, Matlab

**Frameworks and Libraries:** ROS, pandas, NumPy, Matplotlib, OpenCV, pyTorch, keras, CASADI, ForcesPRO, gym

**Developer Tools:** Git, Docker, Visual Studio, PyCharm, CMake

**Engineering Tools:** Linux, Solidworks, Siemens NX, L<sup>A</sup>T<sub>E</sub>X, MS Office

## AWARDS & PRIZES

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### 2x Outstanding D-MAVT Bachelor Award (1st year, overall)

ETH Zürich, Sep. 2017 & 2019

Received once for achieving one of the top 5 grade averages out of 543 students on the first year examinations and a second time for graduating with one of the top 5 GPAs out of 262 graduates.

### SGA Förderpreis

SGA, Nov. 2019

Award for the best Bachelor's Thesis in the field of Automatic Control issued by the Swiss Society for Automatic Control (Schweizerische Gesellschaft für Automatik, SGA)

### Excellence Scholarship & Opportunity Programme

ETH Zürich, Mar. 2020

Full scholarship and mentorship throughout the whole Master's program, awarded by the rector of ETH.

## ADDITIONAL

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**Languages:** English (native), German (proficient), Swiss German (native), French (working proficiency)

**Interests:** Badminton, Skiing, Politics