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# Jonathan Hellwig

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## PROFILE

As an industrial mathematics graduate with a deep interest in robotics and machine learning, I am eager to work and innovate on real-world systems. My experiences indicate my motivation to explore new areas of study and apply my mathematical background to them.

## SKILLS

### Machine learning with PyTorch

Image classification, object detection and reinforcement learning

### Sensor fusion

Processing of measurements from multiple sensors in a real-time system

### Optimization on real-world systems

Iterative closest line algorithms for noisy line detections in image data

## TECHNICAL

**Languages** Python, Rust, R

## EXPERIENCE

### Member of Robocup SPL team HULKS HULKS e.V.

Localization, object detection, sensor fusion  
Participation in the RoboCup 2021, Thailand

Jun 2021 - Present

[Hamburg, Germany](#)

### Group tutor for Numerical methods in geosciences University of Hamburg

Apr 2022 - Sep 2022

[Hamburg, Germany](#)

### Research assistant for Prof. Dr. Jörn Behrens University of Hamburg

Shallow water wave simulation

Jan 2022 - Jun 2022

[Hamburg, Germany](#)

### Internship at actuarial department SIGNAL IDUNA

Estimation of loss reserves

Feb 2021

[Hamburg, Germany](#)

### Group tutor for Optimization University of Lübeck

Apr 2019 - Sep 2019

[Lübeck, Germany](#)

### Group tutor for Linear Algebra University of Lübeck

Oct 2017 - Sep 2019

[Lübeck, Germany](#)

## EDUCATION

### Industrial mathematics (M.Sc.) University of Hamburg

Thesis topic: Relations between variants of stochastic gradient descent and stochastic differential equations

Advisor: Dr. Jens-Peter Zemke

Average grade: 1.3

Oct 2020 - Feb 2023

[Hamburg, Germany](#)

### Computational Life Science (B.Sc.) Universität zu Lübeck

Award for best graduate 2019

Thesis topic: Multilevel Monte Carlo simulations

Advisor: Prof. Dr. Andreas Rößler

Average grade: 1.3

Oct 2016 - Sep 2019

[Lübeck, Germany](#)