

# Martin Huber

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## EDUCATION

### King's College London

- Biomedical Engineering & Image Sciences PhD Oct 2019 – Sep 2023
  - Improving the autonomy of minimally invasive robotic surgical tools via visual servoing by utilizing the latest deep learning advancements.

### Heidelberg University

- Physics MSc (current GPA 3.5) Oct 2016 – Sep 2019
  - Studies with a strong focus on medical physics and autonomous systems.
  - Master's thesis: Implementation and fusion of nonlinear model predictive control with neural networks for autonomous navigation of humanoid robots, C++.  
([Link to GitHub](#)).
- Physics BSc (GPA 3.4) Oct 2013 – Sep 2016
  - Fundamental studies of physics.
  - Bachelor's thesis (GPA 4.0): Characterization of a multienergy x-ray detector for spectral computed tomography, C++.

## WORK EXPERIENCE

### Robotics

- Head tutor of the master's lecture robotics at the Heidelberg University ([Link to my script](#)). Nov 2018 – Mar 2019

### German Cancer Research Center

- Energy calibration of a multienergy CT x-ray detector for a soft tissue contrast as in MRI. Aug 2016 – Mar 2017

### Laboratory Courses

- Holding laboratory courses for undergraduates at the Heidelberg University. Feb 2016 – Apr 2016  
Sep 2016 – Dec 2016

## PROJECTS

### Machine Learning for Computer Vision

- Inpainting of Radon transforms with Deep Convolutional Generative Adversarial Neural Nets and an Autoencoder to reduce the required dose for CT and PET, Python ([Link to GitHub](#), [link to evaluation](#)).

### Artificial Intelligence

- Implementation of an autonomously driving car using behavioural cloning, Python ([Link to GitHub](#)).

## LANGUAGES & SKILLS

- German, English, Mandarin
- Medical Physics, Robotics, Machine Learning, Optimal Control, Simulation
- C++, Python

## VOLUNTEERING

### Physics for Refugees

- Weakly physics experiments for kids at Heidelberg. Oct 2016 – Jul 2018

### Public Volunteer Service

- Working as a caretaker and supervising students at school. Nov 2012 – Apr 2013

## REFERENCES

- **Prof Tom Vercauteren**  
School for Biomedical Engineering & Image Sciences KCL  
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- **Dr Christos Bergeles**  
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