

## Kailin Huang

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Birth: 15.05.1993 in Beijing, China

Nationality: Chinese



### Education

09.2016 – present	<b>ETH Zürich, Switzerland</b> <b>Mechanical Engineering MSc:</b> <b>Focus:</b> Robotics: Computer Vision and SLAM <b>Main Courses:</b> Machine Learning, Image Analysis and Computer Vision, Robot Dynamics, Recursive Estimation, Dynamic Programming and Optimal Control, Vehicle Propulsion System, Flight Dynamics, Fundamentals of CFD, Advanced CFD, Turbulent Flows <b>Master Thesis:</b> Dense Object Simultaneous Localization and Mapping (SLAM)
09.2012 – 08.2016	<b>ETH Zürich, Switzerland</b> <b>Mechanical Engineering BSc - GPA 5.27/6</b> <ul style="list-style-type: none"><li>• Focus Project: Formula Student Electric (Aerodynamics)</li><li>• Bachelor's thesis: Feasibility study of an unsprung aerodynamic package on a Formula Student race car</li></ul>
08.2009 – 06.2012	<b>Gymnasium Marienthal, Hamburg, Germany</b> <b>German Highschool - Abitur grade 1.2 (best 1.0, pass 4.0, worst 6.0)</b> <ul style="list-style-type: none"><li>• Main courses: Physics, Chemistry and Biology</li><li>• Extracurricular: Event AG: event management and stagecraft</li></ul>

### Work / Project Experience

03.2018 – 10.2018	<b>NIO, Shanghai: Autonomous Driving Internship</b> <ul style="list-style-type: none"><li>• Sensor fusion using particle filtering for lane level localization using Vision, GPS and IMU data.</li></ul>
03.2018 – 10.2018	<b>Computer Vision and Geometry Group, ETH Zürich</b> <b>Master Thesis:</b> Dense Object Simultaneous Localization and Mapping (SLAM) Grade 5.5/6 <ul style="list-style-type: none"><li>• Supervisor: Prof. Marc Pollefeys</li><li>• Dense SLAM using RGB-D cameras with semantic instance segmentation using deep learning. Using alignment of depth image to create a reconstruction of each object, which can be used as landmarks for localization and loop closure.</li></ul>
03.2016 – 09.2016	<b>MAHLE Behr GmbH Co. KG, Stuttgart, Germany</b> <b>Internship</b> CFD Method Development Programming Java-Tools for automation of STAR-CCM+ workflow and Post-Processing
09.2013 – 08.2015	<b>Akademischer Motorsportverein Zürich (AMZ Racing Team)</b> <ul style="list-style-type: none"><li>• Design of the steering system</li><li>• Design of the aerodynamic package (Siemens NX) and CFD simulation (STAR-CCM+)</li><li>• Wind tunnel testing at RUAG automotive wind tunnel in Emmen, Switzerland</li></ul> <b>Awards &amp; Achievements</b> <ul style="list-style-type: none"><li>• Winner in FSE Spain and FSE Austria and 2nd in FSE Germany</li><li>• World Ranking No. 1 of Formula Student Electric</li></ul>

**ETH Zürich****Teaching Assistant** for following lecturers

Leading exercise hours for groups of 20-25 students

02.2018 – 06.2018	<ul style="list-style-type: none"><li>• Informatics 1 for Mechanical Engineers (C++)</li></ul>
09.2016 – 12.2016	<ul style="list-style-type: none"><li>• Introduction in Programming 1 for Computer Science (Java)</li></ul>
09.2014 – 12.2014	<ul style="list-style-type: none"><li>• Engineering Design (Dimensioning) 1</li></ul>
05.2012 – 06.2012	<ul style="list-style-type: none"><li>• <b>Getriebebau NORD, Bargteheide, Germany</b></li><li>• Workshop Internship: Milling, Lathing, Drilling and Welding</li></ul>

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**Skills****Languages**

Chinese: native

German: native

English: full working proficiency (IELTS 7.5)

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**Computer****Programming Languages:**

- C++
- Java
- Python

**Software:**

- MATLAB
- Siemens UG NX: CAD Modeling and Structural FEM
- STAR-CCM+: CFD Simulation
- ANSYS: Structural FEM (basic knowledge)
- Microsoft Office
- LaTeX
- Git

**Operating Systems:**

- Microsoft Windows
  - Linux
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