Kailin Huang

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Mobile: +41786144813 / +8613522109156
Birth: 15.05.1993 in Beijing, China
Nationality: Chinese

Education

09.2016 – present	**ETH Zürich, Switzerland** **Mechanical Engineering MSc:** **Focus:** Robotics: Computer Vision and SLAM **Main Courses:** 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 **Master Thesis:** Dense Object Simultaneous Localization and Mapping (SLAM)
09.2012 – 08.2016	**ETH Zürich, Switzerland** **Mechanical Engineering BSc - GPA 5.27/6** - Focus Project: Formula Student Electric (Aerodynamics) - Bachelor's thesis: Feasibility study of an unsprung aerodynamic package on a Formula Student race car
08.2009 – 06.2012	**Gymnasium Marienthal, Hamburg, Germany** **German Highschool - Abitur grade 1.2 (best 1.0, pass 4.0, worst 6.0)** - Main courses: Physics, Chemistry and Biology - Extracurricular: Event AG: event management and stagecraft

Work / Project Experience

12.2018 – 01.2019	**NIO, Shanghai: Autonomous Driving Internship** Sensor fusion using particle filtering for lane level localization using Vision, GPS and IMU data.
03.2018 – 10.2018	**Computer Vision and Geometry Group, ETH Zürich** **Master Thesis:** Dense Object Simultaneous Localization and Mapping (SLAM) Grade 5.5/6 - Supervisor: Prof. Marc Pollefeys - 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.
03.2016 – 09.2016	**MAHLE Behr GmbH Co. KG, Stuttgart, Germany** **Internship** CFD Method Development Programming Java-Tools for automation of STAR-CCM+ workflow and Post-Processing
09.2013 – 08.2015	**Akademischer Motorsportverein Zürich (AMZ Racing Team)** - Design of the steering system - Design of the aerodynamic package (Siemens NX) and CFD simulation (STAR-CCM+) - Wind tunnel testing at RUAG automotive wind tunnel in Emmen, Switzerland Awards & Achievements - Winner in FSE Spain and FSE Austria and 2nd in FSE Germany - World Ranking No. 1 of Formula Student Electric

	ETH Zürich
	Teaching Assistant for following lecturers
	Leading exercise hours for groups of 20-25 students
02.2018 – 06.2018	• Informatics 1 for Mechanical Engineers (C++)
09.2016 – 12.2016	• Introduction in Programming 1 for Computer Science (Java)
09.2014 – 12.2014	• Engineering Design (Dimensioning) 1
05.2012 – 06.2012	• **Getriebebau NORD, Bargteheide, Germany**
	• Workshop Internship: Milling, Lathing, Drilling and Welding

Skills

Languages	Chinese: native
	German: native
	English: full working proficiency (IELTS 7.5)
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