Kailin Huang

Address: Paul-Feyerabend-Hof 1A, 8049 Zurich, Switzerland
E-Mail: kailin-huang@outlook.com
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

03.2018 – 10.2018	**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