Curriculum Vitae
Alexander Koenig

Education

10/2018 — ongoing	**Technical University of Munich** M.Sc. Robotics, Cognition, Intelligence Exchange Semester at Tel Aviv University
10/2014 — 10/2018	**Technical University of Munich** B.Sc. Engineering Science Exchange Semester at Tor Vergata University of Rome
09/2012 — 05/2014	**King Edward's School Witley, GB** International Baccalaureate (Grade: 40 points – top 5%)

Research Experience

11/2020 — ongoing	**Master Thesis, Harvard Biorobotics Lab, Harvard University** Title: Tactile Grasp Refinement using Analytic Grasp Stability Metrics and Entropy-Regularized Reinforcement Learning Implementation of a C++ robotics simulator in ROS and Gazebo
04/2019 — 09/2019	**Research Intern, Mechatronics in Medicine Laboratory, Imperial College London** Publication: A. Koenig, F. Rodriguez y Baena and R. Secoli "Gesture-Based Teleoperated Grasping for Educational Robotics" In: IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN), 2021.
04/2018 — 10/2018	**Bachelor Thesis, Chair for Computer Aided Medical Procedures and Augmented Reality, Technical University of Munich** Title: Visualization of Complex Bone Fractures in Augmented Reality during Reduction Surgery Development of a HoloLens application and independent implementation of a quantitative study with four trauma surgeons, Thesis Grade: 4.0/4.0

Industry Experience

11/2018 — 01/2019	**Working Student, Microstep, Munich** Software development for usage in sales campaign: web crawler, automated generation of SQL scripts for user registration process
03/2017 — 08/2017	**Intern, Technical Integration, BMW Group, Munich** Evaluation of a rendering software prototype, Extensive testing within the BMW IT-structure, Identification of error patterns and optimization potentials, Support of a scientific study

Skills

Software	Robot Operating System (ROS), Gazebo, Git, Docker, Unity3D, 3DSlicer, LaTeX
Hardware	HoloLens, KUKA iiwa, AprilTags, Oculus Rift, Leap Motion, RGB-D cameras
Programming	C++, Python, C#, Swift, MATLAB, C, GraphQL
Frameworks	PyTorch, Tensorflow 2, Keras, Pyglet, SwiftUI
Languages	German: native, English: proficient, Italian: intermediate, French: beginner