Maximilian Vieweg

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Education

Instituto Superior Técnico Lisboa — Universidade de Lisboa — *Lisbon, Portugal*

MSc Electrical and Computer Engineering — *09/2023 - 06/2024*

- Second year of the Erasmus Mundus Marine and Maritime Intelligent Robotics program

Université de Toulon — *Toulon, France*

MSc Engineering of Complex Systems — Marine and Maritime Intelligent Robotics | 16.6/20 — *09/2022 - 06/2023*

- Erasmus Mundus scholarship recipient for a double degree master focusing on AI applied to the marine sciences
- Relevant Coursework — Machine Learning, Deep Learning, Data-Driven Machine Perception

Vienna University of Technology — *Vienna, Austria*

BA Mechanical Engineering — Mechatronics | Top 15% — *10/2018 - 07/2022*

- Studium Irregulare — Created an individual curriculum combining courses from the Mechanical and Electrical Engineering bachelor programs
- Relevant Coursework — Machine Design I/II, Signals and Systems I/II, Microcomputers

Student Exchanges

- University Center in Svalbard — Summer Research Course: Autonomous Underwater Vehicles in the Arctic — *07/2023 - 08/2023*
- Universitat de Valencia — Spanish B2 Summer Language School — *08/2021 - 09/2021*
- McGill University — Full-Time French B2 Language program — *04/2018 - 07/2018*
- Beijing No. 12 High School — Exchange at a local Chinese high school with courses in Mandarin — *01/2015 - 07/2015*

Work Experience

Amazon — *Vienna, Austria*

Control Systems Development Internship — *07/2020 - 10/2020*

- Listed as inventor on a pending patent application
- Automated configuration management of external devices reducing time for configuration and updates by 85%
- Implemented a back-end system for internal performance dashboards, joining data from databases in different networks

billazy — *Vienna, Austria*

Software Developer (part-time) — *01/2018 - 06/2020*

- Design of a REST API and integration into the existing system using Laravel
- Co-development of PHP based Web-Interface, expanding the database structure to new demands

Austrian Armed Forces — Gardebataillon Wien — *Vienna, Austria*

Mandatory Military Service — Paramedic — *10/2017 - 04/2018*

- Certified Paramedic in Austria

Tailored Apps — *Vienna, Austria*

Back-End Developer Internship — *07/2017 - 08/2017*

- Implementation of a backend endpoint in node.js for data conversion tasks

Projects

- Trajectory Prediction of Unmanned Aerial Vehicles for a Telescope System
  - Bachelor Thesis: Improving robustness in case of malfunctioning object trackers and object occlusion
  - Achieved significant improvement in robustness for occluded and noisy trackers comparing the performance of Kalman and Particle Filters
- Transmission Design
  - Design, Calculations and Dimensioning of a Transmission Box, clutches and roll for roll forming according to DIN and ISO standards
  - Responsible for the calculations and design of parts of the transmission as well as the hydraulically actuated multi-plate clutch
- Identification and Detection of Maritime Objects
  - Trained a Faster R-CNN is trained to detect and categorize maritime objects, visualising each detection with a bounding box
  - Trained a CNN using PyTorch on a high performance cluster to classify fish images

Skills

Programming	Python (PyTorch, Pandas, NumPy), C, C++, Java, MATLAB/Simulink, OpenCV, ROS, SQL
Miscellaneous	Linux, CATIA, 3D Printing, STM32, LaTeX, Microsoft Office, AWS Basic Knowledge, git
Languages	**German**: C2, **English**: IELTS C2, **French**: B2, **Chinese**: HSK 4 eq. B2, **Spanish**: B1/B2