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Education

University of Twente   Enschede, The Netherlands
BSc. Advanced Technology, Graduated Cum Laude   2018–2021
Honours program: Entrepreneurship

ETH Zurich   Zurich, Switzerland
MSc Robotics, Systems, and Control   September 2021–present

Work

ETH Zurich   ETH, Switzerland
Teaching Assistant: Planning and Decision Making for Autonomous Robots   August 2022–January 2023

- Designed and developed programming exercises for the application of dynamic planning. Some of topics include: A^*, RRT^*, optimization, system modelling, control theory.

Experience and Projects

Academic Motorsport Zurich(AMZ) Racing   ETH, Switzerland
Core Member: Online Grip Estimation (Python, ROS, ForcesPro, Matlab)   September 2021–September 2022

- Formulated Moving Horizon Estimation of vehicle dynamics. The model carries out sensor fusion and online tire parameter estimation.
- Used ForcesPro to generate custom solvers for the MHE formulation
- Implemented interface with the Autonomous pipeline via ROS

Academic Motorsport Zurich(AMZ) Racing   ETH, Switzerland
Module Manager: Simulation and Data Analysis (C++, ROS, Gazebo)   September 2022–present

- Lead a team and contributed to the development of a high-fidelity racing simulator for the Driverless application.
- Designed and developed a CI/CD pipeline for testing and performance evaluation of a racing car.

GondolaShare (IOS App)   Venice, Italy
Solo Developer: Boat sharing service/App (Swift, Google Cloud)   2019–2020

- App that allowed users to share boat and gondola rides (like Uber for boats)
- Gained knowledge in: Software development, internet marketing, database management, live-chat systems, location-based services, app policies.

BSc Thesis   Utwente, The Netherlands
Cooperative Adaptive Cruise Control (Matlab)   Spring semester 2021

- Gained knowledge in: Robust and Optimal Control, H_∞ and H_2 controller synthesis, vehicle platoon dynamics and system string stability.

Mixed Reality project   ETH, Switzerland
Virtual-Physical interaction with robotic arm. (Python, ROS, Aruco)   Autumn semester 2021

– An interactive MR application allowing HoloLens2 users to teleoperate a robotic arm (Interbotix Wx250s) without direct line of sight to achieve basic assembly tasks.

Chess robot controlled via EMG — Utwente, The Netherlands

Robot manipulator controlled by EMG signals for DMD patients ((MicroPython, ESP32)) — Autumn semester 2019

– Gained knowledge in: Signal collection and analysis, Control theory, Robot Kinematics (forward, inverse and differential), EMG analysis.

Awards and Honors

Young entrepreneurial award - "Creiamo un'impresa",	2017
Honours Student - University of Twente,	2021