

Zhejun Zhang

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Technical Skills

Scientific Skills

Deep/Machine Learning

Computer Vision

Control Theory

Information Theory

Probability/Statistics

Programming Languages

Python, C++

LaTeX, MatLab, R

Software & Tools

Pytorch, Tensorflow

OpenCV, ROS, Eigen

Gazebo, CARLA

AWS, Slurm, LSF

Git, Bash, Docker

MS-Office, Video Editing

Languages

Chinese	native
English	proficient
German	proficient

Awards

2019 Willi Studer Prize

Best Master Student
in Dept. of ITET, ETH Zurich.

2016 ESOP Scholarship

For MSc at ETH Zurich.

2015 BSc with High Distinction

Best Bachelor Student
in Dept. of EI, TU Munich.

2012 DAAD Full Scholarship

For BSc at TU Munich.

Education

2020 – now Ph.D. at ETH Zurich, Switzerland

Supervised by Prof. Luc Van Gool at Computer Vision Lab.

- Toyota Research on Automated Cars in Europe (TRACE).
- Focus on end-to-end driving and neural simulation.
- Policy learning, IL, RL, world models and neural rendering.

2016 – 2019 MSc at ETH Zurich, Switzerland

Dept. of Information Technology and Electrical Engineering.

- Focus on system & control, computer vision & deep learning.
- Top 1 in the ranking (Grade: 5.93/6.0).

2015 – 2016 MSc at TU Munich, Germany

Dept. of Electrical and Computer Engineering.

- Unfinished, ended without degree.
- Grade of the 1st year: 1.0/1.0.

2012 – 2015 BSc at TU Munich, Germany

Dept. of Electrical and Computer Engineering.

- Focus on control & communication engineering.
- Top 1 in the ranking (Grade: 1.03/1.0).

2006 – 2012 Shanghai Foreign Language School, China

- German as the first foreign language (DSD II, C1 level).

Experience

2019 R&D Engineer at Seervision AG, Zurich.

Develop cinematographic tracking algorithms for PTZ cameras.
CV and robotics: perception, estimation and optimization.

2018 Master Thesis at IFA, ETH Zurich and Seervision AG.

Supervised by Prof. John Lygeros and Dr. Nikos Kariotoglou.
Learning Cinematographic Motion Control from Videos.

2017 Research Assistant at Seervision AG, Zurich.

Prototype learning-based tracking algorithms for pan-tilt cameras.

2017 Semester Project at IDSC, ETH Zurich.

Improving the trajectory tracking of a parametrized MPC.

2016 Semester Project at IFA, ETH Zurich.

Object tracking on Arduino and a commercial gimbal.

2015 Bachelor Thesis at TU Munich.

Online Gaussian process regression parametrized by dual quaternions.

2014 Semester Project at TU Munich.

Real-time rendering of event-based cameras on Oculus Rift VR.

Publications

Zhang, Z., Liniger, A., Dai, D., Yu, F., Van Gool, L. **(2022)** TrafficBots: Towards World Models for Autonomous Driving Simulation and Motion Prediction. *Under Review*.

Bührer, N., Zhang, Z., Liniger, A., Yu, F., Van Gool, L. **(2022)** A Multiplicative Value Function for Safe and Efficient Reinforcement Learning. *Under Review*.

Zhang, Z., Liniger, A., Dai, D., Yu, F., Van Gool, L. **(2021)** End-to-End Urban Driving by Imitating a Reinforcement Learning Coach. *IEEE/CVF International Conference on Computer Vision (ICCV)* .

Patents

2022 TrafficBots: Towards World Models for Autonomous Driving Simulation and Motion Prediction.

2021 End-to-End Urban Driving by Imitating a Reinforcement Learning Coach.

Student Supervision

Master Thesis

Nick Bührer. Safety Critics for Safe and Efficient Reinforcement Learning.

Felix Schmitt-Koopmann. Uncertainty in Reinforcement Learning with World Models.

Manuel Breitenstein. Dream To Drive: Learning Latent Dynamics for Model-Based Reinforcement Learning.

Semester Projects

Alan Tirado Mayer. Learning-Based Autonomous Racing Path Planning from LiDAR Data.