Zhijie Wang

Unit 99, No.350 Columbia St. West, Waterloo, ON, CA N2L 6G8

☎ +1 (226) 978-7959

✉ zhijie.wang@uwaterloo.ca

🖱 http://wangzhijie.me

Education

09/2019 - 08/2020 (Expected)	**University of Waterloo**, Ontario, Canada. **M.Eng** Electrical and Computer Engineering
09/2015 - 06/2019	**Beijing University of Posts and Telecommunications**, Beijing, China. **B.E.** Telecommunication Engineering, GPA:3.52/4.0

Experiences & Selected Projects

11/2018 - 06/2019 **Megvii Technology Ltd.**, *Megvii Research*, Beijing, CN.

Research Intern at SLAM Group.

Mentor: Dr. Yichen Wei & Mr. Xiao Liu & Dr. Yijia He

- Researched on range finder's motion-blur and its effects on Point-to-line ICP (Iterative Closest Point). Resulted in a CN Patent.
- Implemented a laser-odometer calibration tool based on Canonical Scan Match and Maximum-likelihood with C++.
  https://github.com/MegviiRobot/OdomLaserCalibraTool

07/2018 - 09/2018 **National University of Singapore**, *Dept. of ECE*, Singapore, SG.

Non-graduating Research Student at Unmanned System Research Group.

Superviosr: Prof. Ben M. Chen & Dr. Lin Feng

- Researched on continuous localization and mapping in low-light environments based on multi-sensors fusion.
- Researched on image enhancement for underwater tasks based on conditional Generative Adversarial Networks. Resulted in a paper submitted to TCSVT (IEEE Transactions on Circuits and Systems for Video Technology)
  https://github.com/Xiaodong-Bran/underwater-image-enhancer

09/2017 - 06/2018 **Tsinghua University**, *Dept. of EE*, Beijing, CN.

Research Intern at iVip Group.

Superviosr: Prof. Fei Qiao

- Researched on Visual Semantic SLAM based on ORB-SLAM2 and SegNet. Resulted in a CN Patent.
- Particpated in ROS programming for SLAM system test and evaluation.

Publications

Journal Papers

- Xiaodong Liu, Zhi Gao, **Zhijie Wang**, Yu Herng Tan, Yingcai Bi, Ben M. Chen, **Deep Feature Aggregated Conditional GAN for Underwater Image Enhancement**, *IEEE Transactions on Circuits and Systems for Video Technology*. Submitted.

Patents

- Xinjun Liu, Chao Yu, Fei Qiao, Fugui Xie, **Zhijie Wang**, **A Robot SLAM System towards Dynamic Environments**, *CN Patent Application No. CN108596974A.* Published.
- Yijia He, Xizhen Xiao, **Zhijie Wang**, Xiao Liu, **A Motion Estimation Algorithm based on LiDAR Taking Account of Robot's Motion Blur**, *CN Patent* Submitted.

Relevant Coursework

Beijing Univ. of Posts & Telecommunications

Computer Science The Fundamentals of Computer (90/100), Data Structures (90/100), Programming Practices (93/100), Database Technology and Application (92/100), Fundamentals of Information Theory (94/100), Computer Communication and Networks (90/100), Software Defined Networking (94/100)

Electrical Engineering	Fundamentals of Circuit Analysis (90/100), Electronic and Circuit Foundation (92/100), Introduction to Communication Engineering (95/100), Digital Signal Processing (91/100), Principles of Communications I (90/100), RF and Microwave Technology (96/100)
Mathematics	Linear Algebra (93/100), Probability Theory and Mathematical Statistics (92/100)

University of Waterloo

Electrical and Computer Engineering	ECE 606 - Algorithm Design and Analysis (88/100), ECE 613 - Image Processing and Visual Communication

Technical Experience

Extremely Proficient With

Languages	C++, Python, MATLAB
Softwares	ROS, OpenCV, Eigen, LaTeX, Git, Windows, Ubuntu

Have Experience With

Languages	Virelog, VHDL, SQL
Softwares	AutoCAD, Multisim, Quartus, SQL Server

Language Proficiency

English	**IELTS: 7** Reading: 7.5, Listening: 7.5, Speaking: 6, Writing: 6 (Jan 2019)

Honors

Scholarships	3 times Scholarship of Beijing University of Posts and Telecommunications (2016 & 2017 & 2018)