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Zhijie Wang

Education

09/2019 - 01/2021 (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
- Developed a simulator for testing MegviiAres robots with laser and vision sensors based on Gazebo.

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.
  https://github.com/paulwong16/TVO-GridMap
- 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.

03/2018 - 06/2018 **Beijing Univ. of Posts & Telecommunications**, *School of ICE*, Beijing, CN.
Curriculum Design at Future Network Lab.
Superviosr: Prof. Haipeng Yao
- Implemented a virtual network embedding algorithm with MATLAB.
  https://github.com/paulwong16/Virtual-Network-Embedding

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	Algorithm Design and Analysis (ECE 606, Fall 2019), Image Processing and Visual Communication (ECE 613, Fall 2019)

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)
Chinese	**Mandarian & Hokkien** Native Speaker

Honors

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