# Zhijie Wang

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## Education

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|---|---|
| 09/2019 - 01/2020 (Expected) | **University of Waterloo**, Ontario, Canada. <br> **M.Eng** Electrical and Computer Engineering |
| 09/2015 - 06/2019 | **Beijing University of Posts and Telecommunications**, Beijing, China. <br> **B.E.** Telecommunication Engineering, GPA:3.52/4.0 (85.33/100.0) |
| 09/2012 - 06/2015 | **Fuzhou No.1 Middle School**, Fuzhou, China. |

## 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 considering about robot's motion blur**, *CN Patent* Submitted.

## Relevant Coursework

### Beijing Univ. of Posts & Telecommunications

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|---|---|
| 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

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|---|---|
| Electrical and Computer Engineering | Algorithm Design and Analysis (ECE 606, Ongoing), Image Processing and Visual Communication (ECE 613, Ongoing) |

## Technical Experience

### Extremely Proficient With

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

### Have Experience With

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

## Language Proficiency

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| English | **IELTS: 7** Reading: 7.5, Listening: 7.5, Speaking: 6, Writing: 6 (Jan 2019) |
| Chinese | **Mandarian & Hokkien** Native Speaker |

## Honors

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