# Junquan Qu

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### **EDUCATION BACKGROUND**

Faculty of Electronic Information and Electrical Engineering, Dalian University of Technology

Dalian, China

**B.** E. in Electronic Information Engineering (English Intensive)

Aug. 2016 - Jul. 2020(Expected)

Overall GPA: 3.55/4.0

Hasso Plattner Institute, University of Potsdam

Potsdam, Germany

July 2018

**SKILLS** 

**Programming skills:** C/C++, MATLAB, OpenCV etc.

PROJECT EXPERIENCE

Summer school (GPA: 3.5)

**Dalian University of Technology** 

Dalian, China

Project: Target Detection Based on Raspberry Pi

Oct. 2017- Mar. 2018

The Undergraduate Innovation and Entrepreneurship Training Program, Advisor: Yanqing Guo

- Utilized OpenCV to identify objects with specific color or shape based on Raspberry PI
- Conducted the design of color recognition part, and achieved the automatic recognition of round object through adjusting the HSV to adapt to different environments.
  - Apply the algorithm to picking robot to identify specific fruits for easy picking

## Project: The Design and Completion of 3D Printer

Jan. 2017 - Jan. 2018

The 11th iCAN international innovation entrepreneurship competition, Advisor: Assoc. Prof. Feilong Wang

- Built an FDM 3D printer, optimized the mechanical structure, comparing with different structures of 3D printers, and modified Malin firmware to make the printer run more stable and print better.
  - Mainly in charge of mechanical structure design and optimization, programming firmware, etc.
  - Won various awards in technology innovation competitions.
- Transferred the work to a painting and calligraphy robot project by modifying the motion-control part of Malin's firmware and adding a module to convert Chinese or English characters letters into G code to control the machine movement

#### Project: Millimeter-wave Directional Transmission and Reception

Sep.2018 - Mar. 2019

Advisor: Assoc. Prof. Ming Li

- Studied on beam forming by fixing the antenna array of millimeter-wave at several angles to transmit and receive, and designed the codebook for the receiver in open-loop (no feedback) and closed-loop situations
- Applied precoding and beam sweeping to obtain characteristics of channels in fixed directions, and compressed sensing to obtain characteristics in other directions

## Project: Implementation of Federated Learning based Next-word Prediction of Mobile Keyboard Nov, 2019 - Now

- Adopt RNN to develop language models quick and accurate enough
- Use network pruning and weight sharing to compress the model to meet the limitation of the on-device.

#### INTERNSHIP

Neusoft Corporation Dalian, China

Software Development Intern,

Jun. 2019

- Worked on a project about fire alarm system, and developed a website to achieve data visualization
- Mainly responsible for data transmission: sending the sensor data to the host via ZigBee, and transferring the data from the host to upper computer, and then to the website server

## SCHOLARSHIP, AWARDS, AND OTHERS

- Scientific and technological innovation award (2017)
- 2<sup>nd</sup> Prize (National) and 1<sup>st</sup> Prize (Province), the 11th iCAN international innovation entrepreneurship competition (2017)
  - 3<sup>rd</sup> Prize, the third industry 4.0 international college student's 3D printer design invitational competition (2017)
  - Excellent Student Cadre (2018)

Other Activities: Visited alumni enterprises, communicated our entrepreneurial ideas and projects to alumni enterprises.