

MINGXI JIA

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EDUCATION

Beijing University of Chemical Technology (BUCT) 2016 - 2020
Bachelor of Engineering in Mechanical Design, Manufacturing and Its Automation. Distinguished Graduate
Cumulative GPA: 3.35 (84.5/100); Ranking: 9/87
Thesis: Research on lidar-SLAM algorithms for Automated Guided Vehicle, supervised by Professor Guo Qing

Standardized Tests

TOEFL iBT: 100, TOEFL MyBestScore: 103, GRE:317

ACADEMIC EXPERIENCE

3D Innovation Lab at BNU-HKBU UIC 08/2020 - 08/2021
Full-time Research Assistant in Computer Science Supervisor: Professor Hui Zhang

- Participated in an NSFC project, served as a team leader in charge of data processing, simulation, image segmentation and silhouette-based 3D reconstruction
- Improved a salient object detection model for segmentation, utilizing a multi-level feature extraction
- Reconstructed 3D human and 3D object model using Multi-View Stereo(MVS) methods
- Coded various applications for quadric error mesh/polygon simplification, Laplacian deformation
- Developed a data analysis framework for 3D shape reconstruction using Principal Component Analysis
- Created a new dataset of 3D morphable model with MAYA and COMSOL
- Implemented a real-time RGB-D indoor reconstruction algorithm and a monocular human reconstruction learning-based model for online-education applications

Division of Science and Technology, BNU-HKBU United International College 08/2020 - 02/2021
Teaching Technician Supervisor: Professor Haipeng Guo

- Designed and reorganized lab instructions about micro-architecture, ISA, compiler and circuit simulation
- Developed an online learning platform based on Ubuntu for Computer Organization(Fall, 2020)

Undergraduate Innovation & Entrepreneurship Program at BUCT 01/2019 - 09/2019
Lead Researcher Supervisor: Professor Qing Guo

- Received an innovation award from college, for the project is thorough and innovative
- Built an indoor remotely-controlled robot using 2D-lidar-based SLAM algorithms
- Designed the hardware/software architecture, and an interactive control interface with Tornado framework
- Improved the localization algorithm using a 9-axis IMU, cooperating with 2D-lidar
- Served as undergraduate lab assistant in Introduction to Microcontrollers(Spring, 2019), helping manage lab exercises on servo controlling

Data Innovation Team at Hebei University of Technology 06/2019 - 07/2019
Undergraduate Researcher Supervisor: Professor Xian Rong

- Built a high-precision location function utilizing Ultra-Wide Band (UWB) Radar
- Used Kalman filtering techniques to effectively smooth out coarse data for optimizing localization performance

Robot Design Team at Youngster Robotics Competition 10/2017 - 12/2017
Lead Researcher

- Received a 2nd prize for excellent performance in all three sessions: Manipulation, Navigation and Interaction
- Built an autonomous tracking vehicle using gray-scale sensors allowing the robot to track black marking lines
- Designed a 6-DoF robot arm motivated by servo motors to grab objectives
- Developed an obstacle avoidance application using 2 infrared sensors and an ultrasonic sensor

TECHNICAL STRENGTHS

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|-----------------------------|-------------------------------------------------------------------------------|
| Hardware | Raspberry Pi 3B+, ARM Cortex-M4F CPU, Siemens S7-1200 PLC |
| Programming | C++, MATLAB, Python, ARM Assembly |
| Library | Robot Operating System(ROS), Pytorch, OpenCV |
| Software & Tools | AutoCAD, Gazebo, Solidworks, Keil, L ^A T _E X, MS Office |
| OS | Ubuntu Linux, MS Windows, MacOS |

WORK EXPERIENCE

BMW Beijing R&D Center

09/2019 - 03/2020

Intern

Line Manager: Dr.Frank Lehnert, Mrs.Dawei Li

- Headed the arrangement of internal surveys of innovative prototype improvements
- Assisted in the benchmarking of vehicle design, cost analysis, and user experience development of Human Machine Interaction
- Assembled scientific papers on display technology for interdisciplinary studies for cross-department cooperation
- Assisted experts from the Munich headquarters and suppliers from Beijing in illumination design and tests on capacitive touch technology
- Planned and executed technical evaluations on Chinese sensor suppliers and sub-suppliers on their R&D capabilities and technology

Kunshan Julin Machinery Co.

10/2019 - 11/2019

Assistant Engineer

- Coded a palletizing program for a Flexible Manufacturing Line (FML) based on the EFORT ER3 industrial robot
- Build up 3D ABS models of a vehicle prototype, using 3D-printers with Solidworks and CURA

LEADERSHIP

BUCT debate team

09/2018 - 06/2019

President

- Held several on-campus and friendly debate competitions, including the BUCT vs. Tsinghua Performance Competition, to provide a platform for knowledge exchange
- Gave lectures for freshmen in BUCT to inspire and coach them on methods of deductive reasoning and public speaking

BUCT Orchestra

10/2016 - 05/2019

Chair Flutist

- Arranged daily practices and auditory training twice a week for members of the woodwind department
- Led the solo part of A. Piazzolla's *Libertango* in 2016 BUCT New Year's Concert at Forbidden City Concert Hall, Beijing
- Served as the Principal Piccoloist and led the solo part of Bizet's *Symphony in C "Roma"* in 2018 BUCT New Year's Concert at BUCT Stadium, Beijing

RECOGNITION

- Distinguished Graduates of Beijing — 2020
- BUCT Merit Student — 2019
- BUCT Undergraduate Innovation & Entrepreneur Program Innovation Award — 2019
- BUCT Student Leader Honor — 2018
- BUCT Youngster Robotics Competition Second Prize — 2018
- BUCT Renmin Scholarship Second Prize — 2017, 2018, 2019
- BUCT Renmin Scholarship Special Prize — 2016
- Beijing Musical Festival Second Prize — 2016