

## EDUCATION

<i>The University of Hong Kong</i>	<i>M.phil. in Computer Science</i>	<i>2022.09 - 2024.06</i>
◆ Supervisor : <i>Prof. Heming Cui</i>		
◆ Research Direction : Distributed System Robot; Monocular Depth Estimation; Knowledge Distillation;		
<i>Lanzhou Jiaotong University</i>	<i>B.Eng. in Computer Science and Technology</i>	<i>2018.09 - 2022.06</i>
◆ GPA : 3.7/4.3		
◆ Course Highlight : Mathematical Modeling (91); JavaEE (92); Cloud Computing and Applications (91); Smart transportation system (91)		
◆ Thesis : Obstacle Avoidance Robot Based on Laser SLAM and Monocular Depth Estimation		

## PUBLICATIONS

### ❖ Conferences and Journals

- [1] Application of BDS/GPS Fusion Relative Positioning in Slope Deformation Monitoring**  
*Junming Wang* , Jiuyuan Huo\*, Lin Mu , Hamzah Murad Mohammed Al-Neshmi , Tao Ju  
The 2<sup>nd</sup> International Conference on Robotics, Intelligent Control and Artificial Intelligence (*RICAI*), 2020.
- [2] Design of GNSS-RTK Landslide Monitoring System Based on Improved Randa Criterion**  
*Junming Wang*\*, Yi Shi  
The 6<sup>th</sup> International Conference on Electronic Information Technology and Computer Engineering (*EITCE*), 2022.
- [3] Design of Beidou high-precision positioning geological disaster monitoring system**  
*Junming Wang* , Jiuyuan Huo\*, Cong Mu, Lin Mu, Hamzah Murad Mohammed Al-Neshmi, Meng Liu, Tao Ju  
In the Microcontrollers & Embedded Systems, 2021.
- [4] Geological disaster monitoring experimental platform based on Beidou**  
Cong Mu, jiuyuan Huo\*, *Junming Wang* , Lin Mu , Meng Liu , Jing Zhang  
In the Scientific & Technical Information of Gansu, 2021.
- [5] SAR image change detection based on fusion difference map and FCM algorithm**  
Lin Mu, Jiuyuan Huo\*, Hamzah Murad Mohammed Al-Neshmi, *Junming Wang*  
In the Computer Science, 2021.

### ❖ Patents

- [1] A geological disaster monitoring system based on Beidou satellites**  
Jiuyuan Huo, *Junming Wang*, Lin Mu, Meng Liu, Hamzah Murad Mohammed Al-Neshmi, Cong Mu, Tao Ju  
Gansu Province : CN212084334U, 2020.
- [2] Image change detection methods, devices, electronic equipment and storage media**  
Jiuyuan Huo, Lin Mu, Meng Liu, Haina Zhang, Deli Zhang, Hamzah Murad Mohammed Al-Neshmi, *Junming Wang*.  
Gansu Province : CN111476813A, 2020.

## COMPETITION CERTIFICATE

➤ Amercian College Students Mathematical Contest in Modeling	<i>Meritorious Winner</i>
➤ National College Students Mathematical Contest in Modeling	<i>National Second Prize</i>
➤ National College Student E-commerce Challenge	<i>National Second Prize</i>
➤ National University Biological Network Design Competition	<i>National Second Prize</i>
➤ Undergraduate Embedded Artificial Intelligence Design Competition	<i>National Second Prize</i>
➤ Renewable Energy Excellent Technology Works Competition	<i>National Third Prize</i>

## PROJECTDS

- ❖ **Beidou-based high-precision geological deformation monitoring system** 2020.03~2021.03
  - **National College Student Innovation and Entrepreneurship Training Project, 10000RMB, Rank(1/5)**
    - **Data collection:** RaspberryPi 4B connects sensors to collect data & GNSS-RTK positioning to monitor displacement
    - **Edge computing:** Jetson Nano deploys algorithm model(Improved  $3\sigma$  model and low-pass filtering)
    - **Data transmission:** NB-IoT/IPv6 combined with MQTT to transmit data to Alibaba Cloud server
    - **Application:** Visualization website (Spring; SpringMVC; MyBatis) & Time series analysis (ARIMA; GM(1,1))
    - **Others:** ROS/SLAM robot automatic inspection & OpenCV lane line detection
- ❖ **Geological disaster monitoring system based on satellite remote sensing image** 2020.01~2021.12
  - **Lanzhou Talent Innovation and Entrepreneurship Technology Plan Project**
    - **Lane line detection:** Gaussian filtering is used to denoise railway images, combined with ROI to extract regions of interest and Candy operator and Hough transform are used to detect railway tracks.
    - **SAR remote sensing image:** The difference method and the logarithmic method are combined with the multiplicative fusion method to generate the SAR image difference map.
    - **Transfer learning:** Combined with migration learning to fine-tune the VGG11 network, freeze the first 7 convolutional layers, and achieve 99.3% image recognition accuracy on the CIFAR10 data set.

## EXPERENCES

### Lanzhou Jiaotong University

2019.09~ 2021.06

Research Assistant@Prof.*Jiuyuan Huo*'s Group

Lanzhou, China

- Embedded System & Internet of Things (*RICAI 20*)
- Edge Computing and Machine Learning (*EITCE2022, in submission*)
- SAR remote sensing image processing (*Journal of Computer Science, in submission*)

### Jiabao Trading Co., Ltd.

2021.01~2021.04

Python Intern@Data Analysis Group

Zhangye, China

- Use SQL to extract key indicators from the sales data of each store, form data reports, and support each team to make corresponding business decisions.
- Use Pandas/Matplotlib to visually analyze different types of commodities.

### Hengsheng Electronic Technology Co., Ltd.

2020.02~2020.04

Java Intern@Technology Group

Zhangye, China

- Responsible for maintaining the warehouse management system, and writing maintenance reports and new functional technical solutions.
- Responsible for the reconstruction of the front-end interface of the website, assisting front-end engineers to complete system design and coding

## AWARD & SKILL

- **Programming Language :** Python(Pytorch&Tensorflow) Java Matlab C/C++
- **English Score :** CET-4 CET-6 IELTS
- **Scholarships:**
  - ✓ The Stars of Self-improvement of Chinese College Students Scholarship (2021, top **1%** of all students)
  - ✓ Tsung-Dao Lee Scholarship (2020, top **1%** of all students)
  - ✓ The Second Prize Scholarship (2021, top **5%** of all students)
  - ✓ Individual Scholarship (2019, 2020)
  - ✓ Innovative-Student Award & Excellent Youth Communist (2020)