

Curriculum Vitae

EDUCATION

- 2022 - 2024** **The University of Hong Kong (HKU)** **Hong Kong SAR**
M.phil. in Computer Science
Supervisor : *Prof. Heming Cui*
- 2018 - 2022** **Lanzhou Jiaotong University (LZJTU)** **Lanzhou, China**
B.E. in Computer Science and Technology
GPA : 3.96/4.3 Rank : 3/121
- 06 - 08/2022** **Oxford Machine Learning Summer School** **Oxford, UK**
Machine Learning | Summer School Program

RESEARCH INTERESTS

I'm particularly interested in **Efficient Deep Learning** and its applications in Robotics and Systems.

For example, the following two aspects:

Robot Perception : Monocular Depth Estimation; NeRF/3D Vision; SLAM/Point Cloud.

Systems : Multi-Robot Systems; Distributed Robotic Learning; Edge Computing

PUBLICATIONS

- EITCE 2022** **Design of GNSS-RTK Landslide Monitoring System Based on Improved Randa Criterion**
Junming Wang , Yi Shi*
The 6th International Conference on Electronic Information Technology and Computer Engineering.
- RICAI 2022** **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 2nd International Conference on Robotics, Intelligent Control and Artificial Intelligence.
- 2021** **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. (*Chinese Journal*)
- 2021** **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. (*Chinese Journal*)
- 2022** **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. (*Chinese Journal*)

PATENTS

- 2020** **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** **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.

EXPERIENCES

- 06/2022 **Research Intern** (6 months) **Chinese Academy of Sciences (IA), China**
- Advisor: Prof. *Chi Zhang* & Prof. *Zhaoxiang Zhang*
- 01/2019 **Research Assistant** (3 years) **Lanzhou Jiaotong University, China**
- Advisor: Prof. *Jiuyuan Huo*
- Edge Computing and Machine Learning (*RICAI '2020*)
 - Embedded System & Internet of Things (*Journal of Microcontrollers & Embedded Systems*)
 - SAR remote sensing image processing (*Journal of Computer Science*)
 - Teaching Platform Research (*Journal of Scientific & Technical Information of Gansu*)
- 04/2021 **Python Intern@Data Analysis Group** (3 months) **Jiabao Trading, China**
- 04/2020 **Java Intern@Technology Group** (2 months) **Hengsheng Electronic Technology, China**

PROJECTS

- 2020-2021 **Beidou-based high-precision geological deformation monitoring system**
- **Data collection:** RaspberryPi 4B connects sensors to collect data & GNSS-RTK to monitor displacement
 - **Edge computing:** Jetson Nano deploys algorithm model(Improved 3σ 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
- 2020-2021 **Geological disaster monitoring system based on satellite remote sensing image**
- **Lane line detection:** Gaussian filtering is used to denoise railway images, combined with ROI to extract regions of interest and Canny 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.

COMPETITION CERTIFICATE

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|---------|---|------------------------------|
| 02/2020 | American College Students Mathematical Contest in Modeling | Meritorious Winner |
| 10/2019 | National College Students Mathematical Contest in Modeling | National Second Prize |
| 07/2020 | National College Student E-commerce Challenge | National Second Prize |
| 08/2020 | National University Biological Network Design Competition | National Second Prize |
| 11/2020 | Undergraduate Embedded Artificial Intelligence Design Competition | National Second Prize |
| 12/2020 | Renewable Energy Excellent Technology Works Competition | National Third Prize |

AWARD & SKILL

- 12/2021 The Stars of Self-improvement of Chinese College Students Scholarship (Top 1% of all students)
- 10/2020 Tsung-Dao Lee Scholarship (Top 1% of all students)
- 06/2020 The Second Prize Scholarship (Top 5% of all students)
- 2019&2020 Individual Scholarship (Top 1% of all students)
- 11/2020 Innovative-Student Award & Excellent Youth Communist