JIREN LI

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EDUCATION

Southwest Jiaotong University (SWJTU)   Sichuan, China
Bachelor of Engineering in Electronic Information Engineering   Sept. 2017 – Jun. 2021

- Major GPA: 3.77 / 4.00 | Major Average Score: 90.44/100 | Ranking**:** 6/128

WORK EXPERIENCE

LAMIdata Corporation, Limited | Algorithm Intern   Sichuan, China
Grading System for Middle School Chemistry Experiment   Mar. 2021 – Jun. 2021

- Collected and annotated video data of chemistry experiment and trained a YOLO model to detect apparatuses
- Applied Unet model, contour detection algorithm, corrosion algorithm and clustering algorithm to measure pH value in videos
- Utilized model output data to compelete logical grading program, connected the program to GUI software and transplanted the software to recording devices with Redis database
- Wrote a paper describing principle and development process of the software as graduation paper

RESEARCH EXPERIENCE

Chinese Research Institute of Land and Big Data | Service Outsourcing Project   Sichuan, China
Surveillance Video Detection of Safety Helmets   Dec. 2019 – Jul. 2020

- Matched with a company called Pactera as an algorithm engineer
- Utilized Faster RCNN to detect helmets and heads and recalculated scores of proposals in consecutive frames to boost accuracy
- Integrated an extensible software with Python to inform supervisor of any people not wearing helmets

Chinese Research Institute of Land and Big Data | Student Research Training Program (SRTP)   Sichuan, China
Intelligent Image Recognition Technology for Land Use Type   Mar. 2019 – Apr. 2020

- Designed a semantic segmentation model based on U-Net for land usage classification in twelve categories
- Embedded the network in an encapsulated recognition software, which was applied in the 3rd National Land Survey

Southwest Jiaotong University Laboratory | Personalized Experimental Project   Sichuan, China
Railway Catenary Pillar Number Recognition   Jun. 2018 – Mar. 2019

- Implemented LeNet-5 with NumPy and evaluated the network with MNIST dataset
- Utilized Faster RCNN based network to create an End-to-End model to recognize numbers on railway catenary pillars

SELECTED PROJECTS

Design of Video Fusion Method in Mixed Reality   Sept. 2020 – Jan. 2021

- Applied Unity3D to create a digital room with a table
- Captured video stream of real table by OpenCV, and projected it onto virtual table to facilitate interactions with users

Railway Information Management System   Apr. 2020 – Jun. 2020

- Developed an interactive web application with C# and ASP.NET, and constructed a database by Microsoft SQL Server to manage railway information

PUBLICATIONS & PATENTS

- Jin Huang. **Jiren Li**. Jianwei Li. Jianbo Li. Zhihong Zhang. Siyuan Zhang, 2020. "A Land Use Type Recognition Method based on U-Net Neural Network" CN Patent CN202011236409.5

HONORS & AWARDS

- 1st Class Scholarship for Academic Excellence   2019 & 2018
- 2nd Class Prize in Sichuan Province, China Undergraduate Mathematical Contest in Modeling   2019
- 2nd Class Prize, Programming Contest of Lan Qiao Cup   2019

SKILLS

- **Programming Languages & Tools:** Linux, C/C++, Python, Java, SQL, NumPy, OpenCV, TensorFlow, PyTorch