Xi XIAO

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EDUCATION:

Chengdu Jincheng College (previously known as Jinchen College of Sichuan University**)**
09.2019 – 06.2023
BA Software Engineering (Artificial Intelligence Class)
Under the supervision of Academician Steve Chen and Professor Zhengji Li
Thesis ranked in the top 1.2 per cent of all colleges
GPA 78.96/100

ACHIEVEMENTS:

-Published Papers-

-Zhengji Li ,**Xi Xiao**, Yuxiao Fan, Jiacheng Xie, Yuhong Xie,..*Pavement Disease DetectionAlgorithm Based on CycleGAN and Improved YOLOv5.* ***Expert Systems with Applications*** [J]. (SCI jcr 1, IF:8.5, Under Review) (First author is the supervisor)

-Zhengji Li,**Xi Xiao,**Yuxiao Fan,Xinrui Li,Jiacheng Xie.*Forest fire detection algorithm based on YOLO-GAT.****Applied Sciences***[J]. (SCI jcr 2, IF: 2.838, Under Review) (First author is the supervisor)

-Zhengji Li,**Xi Xiao**,Yuxiao Fan,Xinrui Li,Jiacheng Xie. *Forest fire detection algorithm based on small target flame detection.* ***Journal of Forestry Engineering***[J].(EI,Under Review) (First author is the supervisor)

-Zhengji Li, Yuhong Xie, **Xi Xiao**, Lanju Tao, Jinyuan Liu, Ke Wang.*An image dataaugmentation algorithm based on YOLOv5s-DA for pavement distress detection.****IEEE 2022 the 5th International Conference on Pattern Recognition and Artificial Intelligence***[C],2022.(EI Conference, Accepted)

-Published Patents-

-Li Zhengji;**Xiao Xi**;Li Xinrui. Road surface defect detection model building method, detection method, storage medium and device (Accepted), 2022.12.26, China 202211675037.5(Invention patent)

-Li Zhengji;**Xiao Xi**; Li Xinrui... A targeted forest fire target detection algorithm for YOLO-ForestFire (Patent pending) (Invention patent)

-Li Zhengji;**Xiao Xi**;Li Xinrui... A Pavement Disease Detection Method Based on CycleGAN and Improved YOLOv5 (Patent Pending) (Invention Patent)

-Li Zhengji;Li Xinrui;Dai Changyi;Xiao Xi... Forest fire detection device and its collection module (Granted) 2022.10.19, China, 202222756942.5 (Utility model patent)

-Zhou, Li; **Xiao Xi**..; Ge, Yuque. A security trolley for hand trajectory violence detection based on Al technology (Granted), 2022.05.24, China,202221269620.1 (Utility Model Patent)

-Academic positions –

Session Chair and Reviewer, 2022 the 5th International Conference on Pattern Recognition and Artificial Intelligence (Chengdu, China)

PROJECT EXPERIENCE:

Westlake University 3D Big Data Processing and Application Laboratory *06.2023 – 07.2023*

Research related to 3D big data with MIT postdoc xiangru huang (remote internship)

- My work is mainly related to NeRF and aims to extract 3D data from 2D image sets in conjunction with SAM.

Road Pavement Disease Detection *12.2021 – 06.2023*

The project was supported by a road company in Xi'an, Shaanxi Province, and I led the team as team leader to carry out the project.

- I led a team to process over 30,000 images of road pavement damage data collected to create a road pavement damage dataset.
- I propose a novel data enhancement approach to generate image data closer to the real road surface and optimize the target detection network to make it easier to deploy to in-vehicle devices, which has been submitted in a paper in a top SCI jcr 1 journal.

AI + embedded device based forest fire prevention solution (Fire Spotters) *06.2022 – 05.2023*

This project is in collaboration with Mii County, Panzhihua City, to establish a local forest fire research platform; the project is based on embedded collection and sensing equipment and drones for forest fire detection, and is currently applying for three patents and two papers.

- Leading the technical team as the leader of the algorithm team to build a forest fire dataset, to create the world's first publicly available dataset on forest fires in a multi-vegetation environment from a drone's perspective; optimising and innovating the detection algorithm for drone deployment to achieve a practical ground level

Campus violence detection *08.2021 – 03.2022*

This project is a collaborative project with Sichuan University, with a final project title of Excellent, and I am the main leader.

- I was mainly responsible for the innovative optimization of the network part, combined with non-local operation to improve the accuracy of the model, and eventually published a paten.
- I also led the team to participate in a number of competitions based on this project won good results, and cooperate with Huawei Harmony Operating System Research Institute in depth.

Integrated intelligent waste separation termina *02.2021* - 10.*2021*

The project is a waste separation terminal based on embedded equipment and artificial intelligence, and has received support from the Chengdu Municipal Government, the Jinyang Municipal Government and the Tao Cheng Yading Tourist Attractions in Sichuan Province

- I am mainly responsible for the serial port development of stm32 and Android development board, android UI adjustment and the writing of the core logic of the page.
- I also represent the team in cooperation meetings with the Chengdu city government and the Jianyang city government.

WORK EXPERIENCE:

Sichuan Lingxi Technology Co *03.2023 – 06.2023*

Deep Learning Researcher

- Responsible for tracking cutting-edge research in the field, responsible for the direction of the company's deep learning target detection algorithms, committed to improving the detection performance of the model
- Led a team as a group leader in reproducing and improving advanced target detection algorithms in the field, with published patents.

Joint Laboratory, Institute of Disaster Prevention and Mitigation, Southwest Jiaotong University (NBK)

Algorithm Interpreter *11.2022 – 02.2023*

- Assist algorithm engineers in model development and testing, and processing and training of high-speed railway data; reproduce and deploy the latest SOTA models for testing.

Huawei Shuhongkai (Harmony OS) *09.2021 - present*

Station Manager, JC College Station

- As the site manager, we promote competitions and events related to Huawei's Harmony OS, and provide management and lecture training to students who wish to join Open Harmony development.
- Upwards of 130 members.

JD Technology *12.2020 - 02.2021*

Algorithm Interpreter（Visiting）

- Data collection using crawlers, assisting engineers in the development of multi-person inference models and calling API interfaces within the group.

AWARDS:

-The 15th Student Innovation and Entrepreneurship Competition and the 7th China International "Internet+" Student Innovation and Entrepreneurship Competition Intra-school Selection Competition - **Merit Award**

-The 6th Sichuan University Robotics Competition '*Intelligent Waste Sorting Challenge*' - **First prize**

Alipay Student Internet Charity Innovation Competition

-The 8th China International Student "Internet+" Competition - **Bronze Award**

-The 16th National Student Computer Design Competition in Sichuan Province (submitted to the National Competition) - **Special prize**

-Sichuan Province in the 2023 National Student Embedded Design Competition (submitted to the National Competition) - **Special prize**

-Outstanding Class Officer

SKILLS:

- **Languages:** English (CET4: 455), Participated in and chaired many international academic conferences.
- **Sports:** Won the silver medal in the Zigong men's basketball tournament in Sichuan Province as a core member of the basketball team.
- **Leadership and execution**: I have led several award-winning teams as project leader and assisted my supervisor in managing the lab as student leader of the university's artificial intelligence innovation lab.