Wei Liu

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EDUCATION

Sep 2020- Jul 2023 (expected)
Northwest University (NWU, Project 211)|*Advised by Prof. Li Chen*
Master in software engineering (Working at machine learning, deep learning, multi-objective optimization, evolutionary computation)

Sep 2016- Jul 2020
Taiyuan University of Technology (TYUT, Project 211)
B.eng in software engineering

PUBLICATIONS

2022 **Wei Liu**, Li Chen, Xingxing Hao, Wei Zhou, Xin Cao, and Fei Xie. **Offspring Regeneration Method Based on Bi-Level Sampling for Large-Scale Evolutionary Multi-Objective Optimization.** Swarm and Evolutionary Computation(2022) 101152.https://www.sciencedirect.com/science/article/pii/S2210650222001201

2022 **Wei Liu**, Li Chen, Xingxing Hao, Fei Xie, Haiyang Nan, Jiyao Yang, and Honghao Zhai. **A two-stage multi-objective evolutionary algorithm for large-scale multi-objective optimization.** In Proceedings of the IEEE world congress on computational intelligence(WCCI2022), Padova, Italy 18-23 July, 2022. https://ieeexplore.ieee.org/document/9870333/figures#figures

WORK EXPERIENCE

May 2021 - Sep 2021
R&D Engineer
New Road Network Technology Co., Ltd.
- develop machine learning based framework to design a sliding captcha project.
- implement the anti-private access project

Sep 2019 - Mar 2020
Research Intern|*Advised by Prof. Xingzhong Zhang*
Shanghai Briup Software Technology Co., Ltd.
- design and realize the intelligent management system of college players (techniques include: SpringBoot, MySQL, Json and Redis). (dissertation)

RESEARCH PROJECT

Sep 2021
Direction-Guided Learning to Accelerate Evolutionary Search for Large-Scale Multiobjective Optimization(Evolutionary Computation)
- Aimed at accelerating the convergence of solutions for large-scale multi-objective problems
- I designed a feedforward neural network based direction vector construction method to reproduce new solutions efficiently.

Mar 2021
College Answer Sheet Auto-Grading Items(Computer Vision)
Xidian University|Supervised by Xingxing Hao
- For our project, the yolov5 model structure has been simplified and optimized, and the image recognition speed has been further improved.
- I performed random cropping and splicing before image input to the network, and the generalization performance of student ID recognition was further improved.

Jul 2019 | **Self-driving car project based on deep learning**

National Undergraduate Electronics Design Contest | Supervised by Fuping Lin

- Tools: PiCar-X, OpenVINO, Neural Compute Stick 2(NCS2)
- As the principal for this project, I designed a smart car that can simulate scenarios such as track recognition, voice control, pedestrian recognition, etc.

HONORS

The first class scholarship top 5% Awarded to student with outstanding academic performance
Excellent Student Cadre top 3% Awarded to undergraduate student with leadership
National Second Prize Awarded in National Undergraduate Electronic Design Contest

SKILLS

Programming:

- Python(Pytorch, Sklearn)
- MATLAB: over 10,000 lines experience
- Java: (Spring, SpringMVC, MyBatis, SpringBoot, SpringCloud, etc.)
- C&C++

Document Creation:

- Microsoft Office Suite
- Latex
- Markdown