Shengtao Guo

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Website：https://gsssst.github.io/ Data of birth：09/23/2001

EDUCATIONAL BACKGROUND

2020.09 – 2024.06 **Huaqiao University** **Internet of Things Engineering**

◆**Majors:** Data Structure, Operating System, Computer Network, Pattern Recognition, Computer Vision, Embedded System

◆**GPA:** 4.15/5 ◆**Rank:** 5/61 ◆**Thesis:** Research on a Transformer-based method for tiny pedestrian detection

PROJECT EXPERIENCE

2021.05 – 2022.05 **Deep Learning based Method Research on Anime Style Recognition**

National Training Program on Undergraduate Innovation and Entrepreneurship

- **Content:** The deep learning method is applied to the study of style recognition of animation images, and a style recognition system suitable for animation images is constructed.
- **Responsible part:** collecting and organizing animation image data sets by using dataset annotation tools and databases. Developing, managing experimental codes and summarizing experimental data results. Doing survey on cutting-edge papers on deep learning, and deeply participating in paper writing.
- **Achievements:** H. Li, **S. Guo**, et al. A challenging benchmark of anime style recognition. IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshop, 2022.（**CCF-A Conference, The 2nd author**）

2022.05 – 2023.05 **Optimization Research on Self-Attention Mechanism in Vision Neural Network**

National Training Program on Undergraduate Innovation and Entrepreneurship

- **Content:** A dynamic convolution module is introduced into the existing vision Transformer model to make up for its lack of local feature extraction capability, thereby improving the model's accuracy on relatively small-scale data sets. A re-identification system suitable for vehicles is constructed by combining the dynamic convolution module and Transformer model.
- **Responsible part:** Lead the project as the project leader, plan the project plan and follow-up progress, assign and manage the main tasks of each project member. Search and read relevant literature on dynamic convolution, learn relevant knowledge of dynamic convolution, conduct in-depth development of experimental code for embedding dynamic convolution module into Transformer network model, and conduct experiments on Market-1501, VeRi-776 and other data sets. Read deep learning about patents and write patent papers.
- **Achievements:** J. Zhu, **S. Guo**, et al. Vehicle re-identification method based on dynamic convolution transducer: CN115995065A, Pending. **(Student First Inventor)**

AWARDS STATUS

2022	China Undergraduate Mathematical Contest in Modeling (Fujian Division)	First Prize, Leader
2023	9th Fujian Province "Internet +" College Student Innovation and Entrepreneurship Competition	Silver Prize
2022	National Undergraduate Electronic Design Contest (Fujian Division)	Second Prize, Leader
2022	12th MathorCup University Mathematical Modeling Challenge	Third Prize, Leader
2023	14th "Blue Bridge Cup" National Software Competition (Fujian Division)	Third Prize

SKILL

- Language skill：CET-4: 483.
- Professional skill：C/C++, Java, Python, MATLAB (Programming Language); PyTorch, OpenCV, Scikit-Learn (Machine learning libraries); Data annotation tools; LaTeX; Visio; Linux, μC/OS-II; Raspberry Pi, OpenMV (Embedded platform).