Shu Qiuhao

Back to drowning-in-codes |. 13551710618 | bukalala174@gmail.com | yuan
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Gender: male native place: Han Dynasty Year of birth: 2001
Semantics over Syntax. Build over Read. Composition over Inheritance.

education experience

Northwestern Polytechnical University
Master in Computer Science and Technology

Xi'an
2023 - 2026

The first author published the paper: "CoRange: Collaborative Range-aware Adaptive Fusion for Multi-Agent Perception" IEEE TIV
  Student 1 has submitted a paper: "QCTF: A Quantized Communication and Transferable Fusion Framework for Multi-agent Collaborative Perception" IEEE T-ITS related code and published the relevant patents
AI small project: GAN training and generate avatar | classicNets classic network repetition | using Langchain, Transformers build LLM application | LoRA for image generation trainer
Technical Stack: C + +, Python (Gradio, langchain, huggingface-related libs)

Northwestern Polytechnical University
Bachelor of Computer Science and Technology

Xi'an
2019 - 2023

Major courses: Machine Intelligence and Learning Science | modern methods of artificial intelligence | Object-oriented System Methodology
Awards: field second-class scholarship | academic advanced individual | diligent learned advanced individual | outstanding college students
Project: The intelligent training and management platform for museum volunteers based on WeChat mini program was awarded the national college student innovation and entrepreneurship project
  Develop "personal rehabilitation management monitoring small program" application soft
Technology stack: front end (JavaScript, React), back end (Flask, Express, Gin), client (Python, Qt, Electron)
Others: GPA:3.768/4.1 obtain postgraduate qualification | CET-4 | CET-6:602

Project and thesis experience

Multi-agent collaborative sensing
Target detection, multi-agent collaboration, and autonomous driving   *2023-Now*

Project Introduction: In the multi-vehicle collaboration scenario, based on the multi-vehicle data set, improve the collaboration perception performance in the noise, delay and limited bandwidth scenario
Using point cloud encoder and Transformer feature fusion technology, the function of effectively avoiding object occlusion and expanding the field of vision in the multi-vehicle collaboration environment. This method improves the target detection accuracy and significantly reduces the traffic
The range attention mechanism introduces different confidence scores on objects in different regions, and combines the inter-agent and local information fusion technology to achieve the goal of improving the 3 D target detection accuracy in multi-agent cooperative perception. In addition, VQVAE is used to quantify multi-agent communication information to reduce communication. The relevant work was published as the first author in IEEE TIV, with the associated code address

`Python` `OpenCOOD` `Transformer` `multimoding`

Image fusion model for UFGAN
Image fusion, GAN   *2023/9 - 2023/12*

Project introduction: Unet combined with generative adversarial network (GAN) method is adopted to realize the fusion of infrared and visible images. By using the texture details of visible images and the clear performance of infrared images to occluded objects, the overall quality and information accuracy of the fusion image are improved
We have a deep understanding of classical neural networks, such as CNN, RNN, GAN, and further master the training methods of these networks. Code and related reports are open source to Github

`Python` `GAN` `Image Fusion`

JavaGen
Java, Template generator, and Web development   *2024/5*

Developing Spring Web projects often requires a series of template code, and building a template generator (similar to scaffolding) can better master the Web back-end development business
Admidia-related code

`Java` `SpringBoot`

personal skills

I am passionate about new technology, keen to learn new skills through practical project, to quickly master and apply new technology. Often by reading English papers and technical documents to track the latest industry, and familiar with a variety of programming languages and tools. Use programming to solve problems in life, for example, arxiv paper query, weather query, etc.
Understand C + + 17 / 20, be familiar with Linux programming, computer network, data structure and algorithm. Be willing to learn new knowledge.
Proficient in building applications with Python and front-end technology stack. For example, build AI applications with PyQt, diffusers, Flask, etc., including basic RAG and AI Agent, and Ollama local model drawing and writing software.
He often publishes technical articles and building services on his personal blogs and websites, such as building

OSS map beds, using docker, building micro-services, etc.
Participate in open source projects and use efficiency tools, such as submitting PR for blink.cmp (a complete code insert for neovim) with neovim, and writing plug-ins for Wox (similar to Alfred on Windows).

- Technology Stack C + + | Python | JavaScript | Java | and more