**Wang Zirui**

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**EDUCATION**

**Dalian University of Technology 09/2021 – Present**

* **Major: Digital Media and Technology.**
* **GPA:** 3.66
* **Rank: 22**/115
* **Core Courses:** *Higher Mathematics (95), Advanced Programming (93), Data Structures and Algorithms (95), Principles of Computer Composition (91), Operating Systems (93), Databases (93).*

**RESEARCH EXPERIENCE**

**Project:** **PromptFusion: Harmonized Semantic Prompt Learning for Infrared and Visible Image Fusion (Submitted**

**to JAS) 03/2024-05/2024**

*Project Leader*

* In charge of writing model code, such as Contourlet autoencoder, Semantic Constraint module.
* Tuned parameters and models on the server to achieve the best training results, and organized experimental data to create tables.
* Handled most of the writing tasks for the paper, and created the main figure, pipeline, model, and other images.

**Project:** **Design and Implementation of Video Super-Resolution Restoration System (Major Creation, Provincial Level) 4/2023 – 4/2024**

*Research Leader*

* Developed a video super-resolution algorithm using RNN, featuring a filtering module to improve robustness and clarity in noisy environments.
* Executed model training, data testing, and scripted server-OSS synchronization for efficient super-resolution processing.
* Developed a functional WeChat mini-program with an interactive interface for user video uploads.

**Project: Implementation of Image Retrieval System**  **02/2024– 05/2024**

*Principal Researcher*

* Penned the final paper detailing algorithms and model structure for the image retrieval system.
* Suggested and refined the use of Vision-transformer for the image retrieval system's algorithmic foundation.
* Completed the front-end development for the image retrieval system's user interface.

**Project: A Unified Solution Model for Multimodal Image Fusion Based on Diffusion Model Priors**

*Principal Researcher*

* Developed video fusion code and algorithms, utilizing U-Net for temporal information between frames and integrating it with an attention module.
* Targeting TPAMI (IEEE Transactions on Pattern Analysis and Machine Intelligence), a top-tier journal in computer science with an IF of 26.7.

**WORK EXPERIENCE**

**Involvement: Psychology Association 09/2022-09/2023**

*Deputy Minister*

* Managed the campus psychological drama competition, including planning, participant registration, and team scoring.
* Authored articles for the Psychology Association's WeChat account and orchestrated the sign language competition's format and scheduling.

**HONORS &AWARDS**

Outstanding Academic Scholarship

**SOFTWARE & LANGUAGE SKILLS**

* Visual Studio, Anaconda, PyCharm, Matlab, PyTorch, LaTeX
* Languages: Python, C, C++, JavaScript
* English ability:TOFEL 92 GRE 321