Juncheng WU

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EDUCATION

Tongji University 09/2020-06/2024
Bachelor's Degree in Computer Science and Technology

- **Overall GPA**: 91.64/100, **Major GPA**: 92.66/100
- **Core Modules**: High-Level Language Programming (A), Data Structures (A), Principles of Database Systems (A), Artificial Intelligence: Principles and Applications (A), Algorithm Analysis and Design (A), Computer Graphics (A), Operating Systems (A), Advanced Mathematics (A).
- **Scholarships & Titles**: Scholarship of Tongji University 12/2021, Elite Student of Tongji University 01/2022, and Outstanding Student Leader of Tongji University 06/2021.
- **Prizes**: National Students' Innovation and Entrepreneurship Training Program Certificate 04/2023, 12/2022, Second Prize of Mathematical Modeling Contest of Tongji University 04/2022, and Bronze Prize in 2nd National College Students Sports Innovation and Entrepreneurship Competition 10/2020.

RESEARCH EXPERIENCES

Loss Function for Geometric Misaligned Data- *Key Participant, Supervisor: Ni Zhangkai* 09/2022-11/2023

- Referred to abundant paper of the studied domain and designed idea and metric;
- Conducted code debugging, experiment design and experimental verification;
- Supplemented and improved theories of metric and wrote the final paper;
- Completed the paper as the First Student Author and accepted to the paper to IEEE/CVF Conference on Computer Vision and Pattern Recognition 2024 (CVPR).

Task-wise Image Quality Assessment with MLLMs- *Key Participant, Supervisor: Ni Zhangkai* 11/2023-Present

- Referred to abundant paper of the studied domain and designed metric;
- Conducted code debugging, experiment design and experimental verification;

Human Perception Image Quality Assessment with MLLMs- *Key Participant, Supervisor: Ni Zhangkai* 12/2023-Present

- Referred to abundant paper of the studied domain and designed idea and metric;
- Conducted experiment design and experimental verification;

PUBLICATION

Zhangkai Ni, **Juncheng Wu**, Zian Wang, Wenhan Yang, Hanli Wang, Lin Ma. "Misalignment-Robust Frequency Distribution Loss for Image Transformation", Proc. of IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Seattle. Jun, 2024.

EXTRACURRICULAR ACTIVITIES

Class of Computer Science and Technology, *Monitor* 09/2021-Present

- Handled management affairs of class, and planned and organized various activities;
- Helped to improve the overall GPA of my class with the ranking of No. 1 in the whole college.

Tongji University Student Union, *Key Member* 09/ 2021-09/2022

- Planned and organized several large-scale activities like Table Tennis Competition, New Year Party and Sports Meeting of the College of Electronics and Information Engineering.

COMPUTER & QUANTITATIVE SKILLS

Algorithm: be familiar with a variety of common algorithms such as dynamic programming, depth-first search, breadth-first search, Dijkstra algorithm, A* search algorithm, and have a good command of a variety of algorithmic data structures such as monotone stack, dictionary tree, balanced binary search tree, hash table, heap, etc.;
CPP: be good at CPP language and familiar with various STL standard libraries, and know opengl library based on CPP (GLFW, GLEW and GLUT) and CPP QT framework well;
C: have a good command of C language basic syntax, and know C language in the microcontroller development environment configuration well;
Matlab: have a good command of digital signal processing relevant kit, and be familiar with matlab basic syntax and vector & matrix calculation operations;
Machine Learning: once took relevant courses like *Artificial Intelligence: Principles and Techniques* and *Computer Vision* etc., have a clear understanding of traditional machine learning algorithms, and be familiar with cutting-edge deep learning and computer vision algorithms;
Mathematical Knowledge: once took relevant courses like *Advanced Mathematics*, *Liner Algebra*, *Probability and Mathematical Statistics*, *Discrete Mathematics*, and *Formal Languages and Automata*, etc., have formed a basic understanding of mathematics in the field of machine learning by referring to 80+ papers about deep learning, and have a clear understanding of underlying mathematical principles of deep learning and convolutional neural network.