Youzhe Song

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Education

East China Normal University (Project 985)   *Sept 2021 – June 2024*
M.S. in Computer Science and Technology
- GPA: 3.77/4.00 (Top 5%); Admitted via recommendation (waiver of entrance exam)
- **Research Focus:** Visual Generalization, Contrastive Learning (Advisor: Feng Wang, Associate Researcher)

Donghua University (Project 211)   *Sept 2017 – June 2021*
B.S. in Computer Science and Technology
- GPA: 4.01/4.30; **Rank: 2/180**
- **Honors:** Outstanding Graduate, University Scholarship

Purdue University Northwest   *Aug 2019 – Aug 2020*
Exchange Student & Research Assistant, Computer and Information Technology
- GPA: 3.90/4.00; Research Assistant under Prof. Keyuan Jiang (Department Chair)
- Awarded full CSC scholarship; **1st Place**, Notre Dame Data Hackathon

Publications

1. **Youzhe Song**, Feng Wang. "CoReFace: Sample-guided Contrastive Regularization for Deep Face Recognition." *Pattern Recognition*, vol. 152, art. 110483, 2024. 🔗 🐙

2. **Youzhe Song**, Feng Wang. "QGFace: Quality-Guided Joint Training For Mixed-Quality Face Recognition." *In Proceedings of the 2024 IEEE International Conference on Automatic Face and Gesture Recognition (FG)*. 🔗 🐙

Research Experience

CoReFace: Improving Generalization with Contrastive Regularization
- **Identified model brittleness** in open-set recognition as a key challenge to generalization.
- Proposed **CoReFace**, a framework using **contrastive learning** as a regularizer to learn a more discriminative feature space, **increasing the similarity margin for positive/negative pairs by 15%**.
- Achieved state-of-the-art performance by applying self-supervised principles to supervised learning, offering a new path for building more robust recognition models.

QGFace: Unified Representation Learning for Heterogeneous Data
- **Addressed the critical, real-world issue** of training a single model on heterogeneous-quality data.
- Designed a **unified, single-encoder** with a quality-aware strategy, improving efficiency and scalability.
- Reached state-of-the-art on mixed-quality benchmarks with a practical solution for robust recognition.

Industry Experience

Technical Manager   *June 2024 – Present*
Worldwide Educators Conference (WWEC)
- Managed internal and external technical associations and developed an automated tool to generate 1000+ custom conference assets, saving an estimated 100+ hours of manual design work.
- Stimulated our team to digitize the storage of data and the pipeline to further support the growth of this project.
- Established the official website After repeated discussions among colleagues from multiple departments. 🔗

AI Full-Stack Developer Intern   *May 2023 – Oct 2023*
Shanghai KeyoneAI Technology Co., Ltd.
- **Supervisor:** Jie Fang (former Chief AI Architect, IBM China)
- Delivered a powerful design tool by engineering a full-stack application; fine-tuned **Stable Diffusion** with **LoRA** and **ControlNet** to enable intuitive, controllable features like text-to-image and inpainting.

AI Algorithm Intern   *May 2021 – Aug 2021*
Shanghai Feifan Technology Co., Ltd.
- **Supervisor:** Jie Fang (former Chief AI Architect, IBM China)
- Developed a fashion aesthetics recommendation system leading to a **20% inventory reduction** for the client.
- Built the core of the system by designing a color block classification model and establishing a hierarchical rule-based engine to generate aesthetic clothing combinations.

Skills

Languages: Python, JavaScript
Frameworks & Tools: PyTorch, PyTorch Lightning, Docker, WandB, Gradio
Systems: HPC Cluster Management, Server Maintenance