Yitao Qiao

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Education

South China University of Technology
Master's degree in Electronic Information
Weighted Average Score: 88.52/100

Guangzhou, China
Sep. 2021-Jun. 2024

South China University of Technology
Bachelor's degree in Automation
GPA: 3.57/4.0

Guangzhou, China
Sep. 2017-Jun. 2021

Publications

Normalized-Full-Palmar-Hand: Towards More Accurate Hand-Based Multimodal Biometrics
Journal: IEEE Transactions on Pattern Analysis and Machine Intelligence (CCF-A)
Author: Yitao Qiao*, Wenxiong Kang*, Dacan Luo, Junduan Huang.
Status: Published

Palm Vein Recognition under Unconstrained and Weak-cooperative Conditions
Journal: IEEE Transactions on Information Forensics and Security (CCF-A)
Author: Dacan Luo, **Yitao Qiao**, Di Xie, Shifeng Zhang, Wenxiong Kang.
Status: Published

LA3M: Linear Adaptive Additive Angular Margin Loss for Video-based Hand Gesture Authentication
Journal: International Journal of Computer Vision (CCF-A)
Author: Wenwei Song, Wenxiong Kang, Adams Wai-Kin Kong, Yufeng Zhang, **Yitao Qiao**.
Status: Published

Research Experiences

Biometrics & Intelligence Perception Lab (BIPLab), South China University of Technology   Jun. 2021-Jun. 2024

➢ Proposed the "Normalized-Full-Palmar Hand" method, decoupling multiple hand biometric modalities, enabling comprehensive trait utilization for authentication;
➢ Designed and built a synchronous NIR and visible-light imaging device, enabling real-time dynamic hand positioning and clear multispectral imaging of multiple hand biometric traits.
➢ Released two open-access datasets (SCUT_NFPH_v1/v2), first providing pixel-level full hand images, semantic masks and normalized images of each trait, totaling 157,500 images.
➢ Introduced FPHandNet, a feature extraction and authentication network based on the Normalized-Full-Palmar-Hand method, that effectively extracts features from various hand biometric traits for authentication;
➢ Proposed a lightweight Hand Segmentation and Alignment Network (HSANet) capable of real-time segmentation of various hand regions under diverse imaging conditions.

Hangzhou Alibaba Cloud Feitian Information Technology Co., Ltd.   May. 2024-Jun. 2024

➢ Research on jailbreak attack algorithms for Large Multimodal Models (LMMs) that leverage text style transfer techniques to create visual obfuscation.
➢ Explored content safety assessment for large multimodal models, focusing on risk taxonomy and jailbreak evaluation, and assisted in developing a benchmark for safety evaluation.

Guangdong Airport Baiyun Information Technology Co., Ltd   July. 2021-Sep. 2023

➢ Constructed a vehicle statistics system for five categories of airport vehicles, leveraging multi-object tracking techniques to analyze traffic flow in designated airport zones.

Honours & Awards

National Scholarship for Graduate Students (Top 2 % nationwide funding)	2022
Outstanding Graduate in Professional Practice of South China University of Technology	2024
Bronze Award at the 7th China College Students' 'Internet+' Innovation and Entrepreneurship Competition	2021
The Third Prize Scholarship	2020
Endress + Hauser China Scholarship	2019
First Prize in the 13th Intelligent Control Design Competition at South China University of Technology	2018
The Second Prize Scholarship	2018

Others

➢ Professional Assets:
· Deep Learning (PyTorch, ONNX, PaddlePaddle, NCNN), CV Pipelines (Segmentation, biometrics).
➢ English: IELTS 6.5 (≥ 6.0 in each band).
➢ Hobbies: Debating, public speaking, and traveling.