QI WEN GAN

Master Graduate, Tsinghua University, Beijing, China
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RESEARCH INTEREST

Fields: Computer Vision, Computer Graphics, AR/VR, Machine Learning
Topics: 3D Vision/Graphics, Deep learning, Virtual Humans, Audio-Visual Processing (Acoustic & Sound)

EDUCATION

Tsinghua University, Beijing, China — Sep 2021 - July 2023
M.S. in Computer Science and Technology — *Advisor: Prof. Jiang-Tao Wen (first year)*
CGPA: 3.90/4.0 — *Advisor: Prof. Song-Hai Zhang (second year)*

Xiamen University, Malaysia — Aug 2017 - Jun 2021
B.E. (First Honor) in Digital Media Technology (Top 10% graduate) — *Advisor: Prof. Wei-Chuen Yau*

RESEARCH EXPERIENCES

Graphics and Geometric Computing Group, Tsinghua University — Jun 2022 - Jun 2023
Research Student — *Supervisor: Assc Prof. Song-Hai Zhang*

- Investigated on human visual perception of "Realism, Visual density, and Spatial Size" in VR scene's content. Results show a significant difference when comparing user response between an indoor room and an outdoor landscape, particularly in the low realism, low visual density setting.
- Proposed a "gain threshold detection and calibrating" system based on 3 aforementioned factors using a computer vision system. The concept is to utilize the SOTA "Dense depth estimation" and "Semantic Segmentation" models to simulate human visual cognition and calibrate the rotational hyper-parameters in VR. Link to Master's Thesis

Multimedia Lab, Tsinghua University — Dec 2021 - Jun 2022
Research Student — *Supervisor: Prof. Jiang-Tao Wen*

- Worked on an audio-visual AI broadcasting project under multi-camera scenarios using a multimodal transformer. Primary responsibility was utilizing sound signal processing to capture the predominant instrument during the inference stage.
- Explored several SOTA vision-based algorithms, including "Object/human Detection," "Human ReIdentification (Re-ID)", and "multi-view-camera switching" for real-time broadcasting purposes.

Xiamen University, Malaysia — Feb 2021 - Feb 2022
Research Assistant — *Supervisor: Prof. Wei-Chuen Yau*

-Lead, designed, and execute a funded project, "Deep Steganography for Motion Capture Data" in the context of transmission purposes.

AWARDS & HONORS

AWARDS

China Government Scholarship (CGS) recipient — 2021 & 2022
OPPO Global TOP University Innovation Top 100 teams — 2020
ABB Intervarsity Innovation Challenge Top 5 Finalist — 2019

HONORS

First Honors of Bachelor Engineering Degree 2021

LICENSES & CERTIFICATIONS

TensorFlow Developer Certificate Issued Nov 2020 – Expires Nov 2023
Tensorflow
Credential ID 25378492

Deep Learning Specialization Issued Sep 2020 · No Expiration Date
Coursera
Credential ID RSM2HCSZ6UMZ

IELTS Issued March 2021 - March 2026
IDP
Results: 7.0

PUBLICATIONS

DSteganoM: Deep Steganography for Motion Capture Data.
Accepted by Elsevier Expert Systems With Applications

· **Qi Wen, G.**, Wei-Chuen, Y., Yee-Siang., G., Iftekhar, S., Shihui, G., Chin-Chen, C., Yubing, W., & Luchen, Z. (2022). DSteganoM: Deep Steganography for Motion Capture Data.
Project Page

PAPERS IN SUBMISSION

Characterizing Scene's Visual Density,Spatial Size, and Realism in Rotational Gain.
Resubmission to IEEE VR 2023

· Qi Wen, G., Sen-Zhe, X., & Song-Hai Z. (2023). Characterizing Scene's Visual Density,Spatial Size, and Realism in Rotational Gain. (2023)

Multi-modal Learning based AI Broadcast Production.
Submitted to ACM Multimedia 2023 Journal

· Xi, L., Qi Wen, G., Zhi Cheng, W. & Jiang Tao, W. Multi-modal Learning based AI Broadcast Production. (2023)

HOBBIES

Sports: Swimming, Long-distance running, Football, Frisbee, Badminton
Music: Drums, Beats compositing

SKILLS

Software: Blender, Unreal, Unity, 3D MAX, MAYA, After Effect
Language: R, Python, C#, C++, PyTorch, MatplotLib, JavaScript