QI WEN GAN

Master Graduate, Tsinghua University, Beijing, China

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RESEARCH INTEREST

Fields: AR/VR, Computer Vision, Computer Graphics, Machine Learning
Topics: 3D Vision/Graphics, Vision Science, Optical Science, Visual Signal Processing

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*

- Contributed to 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 sound 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.

WORKING EXPERIENCES

Abda Technology @ Kuala Lumpur, Malaysia　　　　　　　　　　　July 2024 - now
Product Manager/ Partner

- Steering the whole product team. Team leader of 3 developers and artist, develop full stack mobile apps. Managed to deliver MVP of two software products within 3 months, actively engaging with go to market strategy by leveraging the use of AI model as a service.

Netvue Inc @ Shenzhen, China   July 2023 - July 2024
Research and Development Engineer

- Performed machine learning-based image/video enhancement in edge-mobile devices such as IP camera modules/phones and back-end server

- Leading the auto video/image editing projects, job contents include custom-built media player with c language, back-end image/video selection algorithm while optimizing media's content perception pipeline, e.g. enhance image/video perception from h.264 compression.

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

IELTS   Issued Feb 2024
Writing:6.5, Reading: 7.5, Listening: 7.5, Speaking:6.5, **Total Results: 7.0**

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

Publications

Exploring the Impact of Visual Scene Characteristics and Adaptation Effects on Rotation Gain Perception in VR
VRST '24: Proceedings of the 30th ACM Symposium on Virtual Reality Software and Technology

· **Qi Wen, G.**, Sen-Zhe Xu, Fang-Lue Zhang& Song-Hai Zhang

Overcoming Spatial Constraints in VR: A Survey of Redirected Walking Techniques
Journal of computer science and technology

· Jia-Hong Lin, Yang-Fu Ren, **Qi Wen, G.**, Kui Huang, Fiona Xiao Yu Chen, Er-Xia Luo, Khang Yeu Tang, Yueyao Fu, Cheng-Wei Fan, Sen-Zhe Xu& Song-Hai Zhang

Effects of Scene Visual Characteristics on the Perception of Rotation Gains
2024 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts (VR), Poster

· **Qi Wen, G.**, Sen-Zhe, X., Ran, G., Fang-Lue, Z.& Song-Hai Z

DSteganoM: Deep Steganography for Motion Capture Data
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

SKILLS

Software: FFmpeg, OpenGL, OpenCV, Blender, Unreal, Unity
Language: R, Python, C, C#, C++, PyTorch, Matlab, JavaScript

PROFESSIONAL SERVICE

Conference Reviewer: IEEE ISMAR 2024 Journal & Conference Track
Conference Reviewer: IEEE VR 2024