Chung-Ho (Kenneth) Wu

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Education

National Yang Ming Chiao Tung University Hsinchu, Taiwan

M.S. *in Multimedia Engineering. Advisor: Yu-Lun Liu.* *Sep 2023 – Present*

Courses: XR Camp, Deep Learning, Perception and Decision Making in Intelligent Systems, Image Processing, Video streaming and tracking, Computer Animation and Special Effects.

National Yang Ming Chiao Tung University Hsinchu, Taiwan

B.S. *in Computer Science.* *Sep 2019 – June 2023*

Publications

Fast Few-shot NeRF Submitted to ECCV2024

Chung-Ho Wu, Chin-Yang Lin, Changhan Yeh, Alex Yen, Cheng Sun, Yu-Lun Liu *CV, ML, AI*

- Proposed a 3D scene reconstruction method from sparse input images, achieving state-of-the-art quality. Significantly outperformed existing approaches with a 10x improvement in training times, while eliminating the need for pre-trained priors such as monocular depth.

Experience

AI Software intern April 2024 – Present

Qualcomm *Python, C++, LangChain*

- Studied the process of converting Python frontend models to formats compatible with company chips.
- Explored the use of PyBind to integrate Python with C++ for converting Python frontend to C++ IR.
- Developing tools using LangChain to automatically generate frontend models using LLM to improve unit test coverage of converters and contribute to internal LLM frameworks.

3D Modeling Intern May 2023 – Aug 2023

ITRI *Python, PyTorch, NerfStudio*

- Contributed to high-quality 3D reconstructions for online shopping products, incorporating cutting-edge techniques.
- Researched and implemented methodologies for the transformation from the Neural Radiance Field into dynamic meshes and textures with spherical harmonic parameters, integrated into the traditional rendering pipeline.
- Focused on literature review, utilizing Python, PyTorch, and NerfStudio API.

Projects

PDM Project: Perception and Decision Making in Intelligent Systems Sep 2023 - Jan 2024

- Leading a project focusing on SLAM, 3D semantic reconstruction, indoor robot navigation, and robot manipulations framework.
- Key areas of expertise include Robotics, Computer Vision, Python, PyTorch, OpenCV, and Open3D.

Boosting Zero-shot text-prompt segmentation Sep 2023 - Jan 2024

- Design and boosting details of zero-shot text-prompt segmentation utilized Fast Bilateral Solver.
- 1st place in NYCU Digital Image Processing water segmentation challenge.

Under the lake: VR Horror Immersive Experience (XR-Showcase Silver Award) Apr 2023 - June 2023

- Led the design and implementation of "Under the Lake," a VR Horror Immersive Experience.
- Focused on utilizing SteamVR API, Unity, and C# scripting for scene mechanisms.

1A2B Game Oct 2022 - Dec 2022

- Designed a 1A2B Game server and client using C++ TCP/UDP sockets capable of handling multiple connections and receiving user commands from standard input.

Expiration Reminder Service Oct 2022 - Dec 2022

- Provide an expiration reminder service, which could remind the user of the expiration and detect the usage rate, by connecting an IoT box with an iOS app using ThingSpeak.
- Construct the IoT box by Arduino and 3D printing, and detect the item in the box using ML skills to update the corresponding data on ThingSpeak timely.

CS Union Loyalty Card Dec 2020 - Feb 2021

- A reward system using Line Bot API, Heroku, and Flask to boost the activities participation.

Programming Skills

Programming Languages: C/C++, C#, Python, SQL, Swift, HTML, JS.

Tools: Git, Docker, Linux, Shell Script, Pytorch, Onnx, TensorFlow, OpenCV, OpenGL, Open3D, Unity, Latex, Flask, Heroku, LangChain.