

Yufei Shi

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EDUCATION

Nanyang Technological University (QS 12) Data Science Doctor LKC Medical School	Aug 2024 - Jun 2028
National University of Singapore (QS 8) Computer Engineering Master Course: Robot Perception (A+) , Deep Learning For Digitalization Technologies (A-)	Aug 2022 - Jun 2023
Sichuan University 985 Electronic Information Engineering Bachelor School of Electronic Information Professional Ranking: 6/125(4.8%) Required Average Score 88.7 Honors in school: Outstanding students (2019,2020); Outstanding Graduates of Sichuan University, National Inspirational Scholarship; Sanxin Scholarship (3%); Sichuan Province Comprehensive Quality A- level Certificate Competition: American College Student Mathematical Modeling Contest (Finalist);	Sep 2018 - Jun 2022

PROFESSIONAL EXPERIENCE

Sony China Algorithm research intern Center for Research and Development	Feb 2022 - May 2022
<ul style="list-style-type: none">Participate in the deep learning-based diseased chicken identification project, establish SSD, FSSD, IFSSD models for picture training, parameter adjustment, and finally realize the rapid and accurate identification of diseased chickens..Participate in Sony sensor environmental testing project pre-data processing process.Participate in the human motion capture project based on inertial sensor and monocular vision sensor fusion, use public 3D extraction method from motion video to extract motion information, use motion Builder and other tools to create bones, describe motion information, model binding work, animation stitching work.	
Kwai Senior Engineer of Machine Learning algorithms Department of Large Models and multimodal Algorithms Optimized multimodal content detection algorithms, utilizing CLIP and transformers to fuse image, text, and audio data, enhancing Kuaishou's original content protection effectiveness and user experience.	Feb 2024 - May 2024 Beijing

PROJECT EXPERIENCE

PVChat: Personalized Video Chat with One-Shot Learning (ICCV 2025) Developed PVChat, the first one-shot personalized video large language model (ViLLM) enabling subject-aware question answering from a single video per individual. Addressed the limitations of existing ViLLMs in identity recognition for applications in smart healthcare and smart homes. (First Author)	
Scene digitization for VR-AR (directed by Professor Zheng Mike, SHOU, NUS ShowLab) 3D scene reconstruction of gut and human body based on NeRF and other models	Aug 2022 - Jun 2025
<ul style="list-style-type: none">Having a deep understanding for the NeRF, Nerfies, HyperNeRF, D-NeRF , etc and testing in our human data.Proposed ColonNeRF, establishing a multi-level neural radiance field, leveraging multi-angle inputs and the VITO-Transformer to enhance information extraction capabilities. This approach yields promising reconstruction results on complex intestinal medical images. (Neurocomputing IF=6.5).	
AI generated Singapore image and video(directed by Professor Zheng Mike, SHOU, NUS ShowLab)	Dec 2022 - Mar 2023
<ul style="list-style-type: none">Demonstrated expertise in finetuning image diffusion models, including DreamBooth and Textual Inversion, to generate personalized concepts.Collaborated on the innovative Tune-A-Video project (GitHub Star 4.3k+ ICCV 2023), which expertly translates textual input into consistent video and achieve style conversion. Primarily accountable for performance evaluation, comparing our proprietary model to SOTA T2V generation/editing methods (PnP and CogVideo), demonstrating competitive results.	
American College Student Mathematical Modeling Contest- (Grand Prize Nomination)	Feb 2021 - Feb 2021
<ul style="list-style-type: none">Select multiple linear regression models, ARIMA models, LASSO regression, Logistic models and cellular automata models to simulate the competitive process of fungal growth and reproduction in different environments, and optimize the content to be published in the EI conference (First Author)	
Cerebral blood oxygen detector based on near infrared light	Dec 2020 - Oct 2021
<ul style="list-style-type: none">Developed a complete set of non-invasive, high-sensitivity, low-cost cerebral blood oxygen detection equipmentResponsible for near-infrared light-emitting receiving device data reception and processing, and carried out the system design serial screen operation interface, and applied for the National utility model patent	

PATENTS AND PAPERS

Yufei Shi, Wei Long Yan, et.al PVChat: Personalized Video Chat with One-Shot Learning (ICCV 2025)
Yufei Shi, Beijia Lu, Jia-Wei Liu, Ming Li, Mike Zheng Shou , ColonNeRF: Hierarchical Neural Radiance Fields for High-Fidelity Long-Sequence Colon Reconstruction , (Neurocomputing IF =6.5)
Yufei Shi, Yijiang Guan, Dingye Zhang, Exploration of the Ability of Fungi for Decomposing Natural Resources Based on Multiple Regression Equation and Cellular Automata, Resource Exploration and Environmental Science (EI Conference)
Jay Zhangjie Wu, Yixiao Ge, Xintao Wang, Stan Weixian Lei, Yuchao Gu, Yufei Shi, Wynne Hsu, Ying Shan, Xiaohu Qie, Mike Zheng Shou, Tune-A-Video: One-Shot Tuning of Image Diffusion Models for Text-to-Video Generation, ICCV 2023, Github <https://github.com/showlab/Tune-A-Video> Star 4.3k
Utilitv Patent Based on Near Infrared Light Local Cerebral Oxvaen Saturation Detection Equipment Patent First Inventor

Utility Patent based on Near Infrared Light Laser General Oxygen Saturation Detection Equipment, etc. First Inventor