Sheng-Yang Chiu

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https://sychiu.github.io

EDUCATION

2027 (expected)	**Simon Fraser University**, Burnaby, BC, Canada *Ph.D., Computing Science* Advisor: Xing-Dong Yang Research Fields: Human-Computer Interaction, Machine Learning
2022	**National Chiao Tung University**, Hsinchu City, Taiwan *M.S., Artificial Intelligence* Advisors: Yu-Chee Tseng, Jen-Jee Chen Thesis: Low-Resolution Thermal Sensor-Guided Image Synthesis
2019	**Yuan Ze University**, Taoyuan City, Taiwan *B.S., Information Communication* Graduation Project Advisor: Wen-Pinn Fang Graduation Project: Fluid Display "Inverted Tinge", an array of submerged custom-built motorized ink nozzles to form graphics in the water. Project page: bit.ly/42tMpFx

PUBLICATIONS

ICRA 2023	**Sheng-Yang Chiu***, Yu-Ting Huang*, Chieh-Ting Lin*, Yu-Chee Tseng, Jen-Jee Chen, Meng-Hsuan Tu, Bo-Chen Tung, and YuJou Nieh, "Privacy-Preserving Video Conferencing via Thermal-Generative Images", *IEEE International Conference on Robotics and Automation*, 2023.
WACV-W 2023	**Sheng-Yang Chiu**, Yu-Chee Tseng, and Jen-Jee Chen, "Low-Resolution Thermal Sensor-Guided Image Synthesis", *Workshop on Real-World Surveillance: Applications and Challenges in conjunction with IEEE/CVF Winter Conference on Applications of Computer Vision, 2023.*
ECICE 2021	Sheng-Ya Chiu, **Sheng-Yang Chiu**, Yu-Ju Tu, and Chi-I Hsu, "Gesture-based Intention Prediction for Automatic Door Opening using Low-Resolution Thermal Sensors: A U-Net-based Deep Learning Approach", *Eurasia Conference on IOT, Communication and Engineering*, 2021.
ASAP 2019	Wenpei Zheng, **Shen-Yang Chiu**, Jui-Chien Hsieh, and Chaochang Chiu, "Smart Rabbit - A Wearable Device As Intelligent Pacer for Marathon Runners", *IEEE International Conference on Application Specific Systems, Architectures and Processors*, 2019.
ICSSE 2018	**Sheng-Yang Chiu**, Jui-Chien Hsieh, Chi-I Hsu, and Chaochang Chiu, "A Convolutional Neural Networks Approach with Infrared Array Sensor for Bed-Exit Detection", *International Conference on System Science and Engineering*, 2018.

EXPERIENCE

2020-2021	**College of Artificial Intelligence, National Chiao Tung University,** Taiwan *Research Assistant* - Developed Intelligent Faults Diagnosis Models for Electric Motors. - Worked on Target Detection and Tracking System for UAV Fleet.
2018	**Industrial Technology Research Institute**, Hsinchu County, Taiwan *Internship* - Accepted competitively (19%) through DIGI+Talent program held by Ministry of Economic Affairs, Taiwan. - Assisted the development of lip recognition model for Mandarin speech.

SELECTED PROJECTS

2023	**Racoon: Relevant Answering Chatbot with Preprocessing and Associating Intelligence** Racoon is a web-based QA tool service using data processing and retrieval techniques while integrated with ChatGPT. Racoon searches knowledge on customized dataset and answers you in a natural voice.
2020	**AI-Powered Interactive Trampoline** Built a neural network to determine landing positions based on ultrasonic sensors. Designed a mini-game GUI for visualization.
2020	**Low-Resolution Heatmap Segmentation based on Thermopile Array Sensor** Collected ground-truth mask using Mask-RCNN on RGB images. Developed a U-Net like segmentation network.
2017	**Auto Design Tool for Heavy-Duty Metal Packaging Optimization, Yuan Ze Univ.** Assisted in the development of evolutionary algorithm and GUI. Participated in CATIA CAD/CAE 36-hour training course and received certifications.

AWARDS

2018	**Undergraduate Research Fellowship,** National Science and Technology Council 107-2813-C-155-013-H
2018	**Adobe Design Achievement Awards - Semifinal** Kinetic Sculpture "Whale Fall"
2018	**The 4th China Mobile Internet Innovation Contest - 2nd Prize** Smart Rabbit - A Wearable Device As Intelligent Pacer for Marathon Runners

SERVICES

Reviewer	CVPR 2023

SKILLS

Software	- Tools: Tensorflow, OpenCV, Qt, Flask, Celery, Git, Matplotlib, Processing, Catia - Languages: Python, Javascript, C++, C#
Languages	English, Mandarin