

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