Chang Si

https://sichang.site
Shen Zhen GLI Technology Limited
Shenzhen, Guangdong, China
charles.sichang@gmail.com (86) 136-9216-7642

WORKING EXPERIENCE

2019.04 — Now *Executive Director,* Department of AI, **Shen Zhen GLI Technology Limited**
- Establishes AI education system for primary school
- Develops new AI education products including software and teaching materials
- Conducts research projects with Xidian University (hand gesture and tracking)

2018.07 — 2019.04 *Algorithm Group Leader,* Department of R&D, **Shen Zhen GLI Technology Limited**
- Built the deep-learning platform of GLI Tech
- Developed a cross-platform vision SDK for robot applications

2017.01 — 2018.07 *Computer Vision Engineer,* Department of R&D, **Shen Zhen GLI Technology Limited**
- Built the whole vision system of *Gomer*, an intelligent robot for AI education
- Built the emotion and behavior engine of *Gomer* with designers
- Built camera and robot head calibration tools used in mass production

2016.07 — 2016.12 *Research Assistant,* Department of MAE, **The Chinese University of Hong Kong**
- Participated in the Innovation and Technology Fund Project - "3D-Freeform Micro-Sculpting Using Non-Resonant Elliptical Vibration Texturing"

EDUCATION

2015.09 — 2016.11 **The Chinese University of Hong Kong**, ShaTin., Hong Kong
M.Sc. in Mechanical and Automation Engineering *GPA:* 3.70 / 4.00

2011.09 — 2015.06 **Xi'an Jiaotong University**, Xi'an, China
B. Eng. in Mechanical Engineering and Automation *GPA:* 3.42 / 4.00

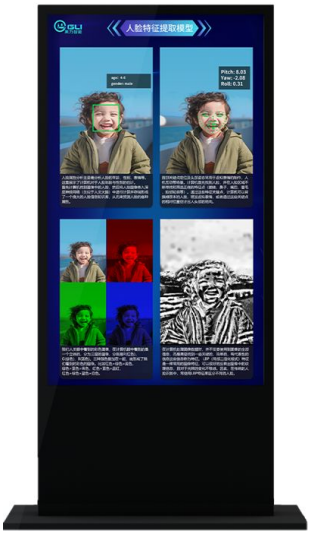
AWARDS AND HONORS

2015 — 2016 *Dean's List,* **The Chinese University of Hong Kong**
2015.05 *2nd Prize in Shaanxi,* **National College Mechanical Innovation Competition**
2014.11 *9th runner-up,* **Honda China Eco-Mileage Challenge**
2012 — 2015 *Siyuan Scholarship,* **Xi'an Jiaotong University**

REPRESENTATIVE PROJECTS

2019.04 — 2019.07 *Project Manager & Chief Engineer,* **Face Sensing Terminal**

- Face Sense Terminal is an education device with one RGB camera and a 43' Screen to visualize the LBP feature map, face detection, face landmarks, gender recognition and face paster.
- Responsible for hardware selection, cost control, technical scheme design. Finally, we achieved the real-time display when all functions running simultaneously on one Nvidia Jetson Nano board.
- Developed the gender recognition function with around 0.95 accuracy rate based on ShuffleNet V2, and instructed other engineers in deploying and accelerating models.



2017.02 — 2018.10 *Computer Vision Engineer,* **Gomer & Gomer App**

- Gomer is an AI education robot that can recognize faces, detect objects and patterns, grab the specific objects and play games with people. Gomer App is an Android application used for presenting the educational content and providing a graphical programming IDE. Users can play games directly with Gomer, or program to communicate with or control Gomer by Gomer App.
- Built the whole vision system of Gomer, and developed all the functions related to CV on both Gomer and Gomer App. Gomer only has a Quad-core Cortex-A7 CPU, so we reduced the model complexity, accelerated the inference process, and used traditional and deep learning methods for better user experience.
- Built the behavior and emotion engine with designers and software engineers. Took SFM method in Game AI for reference.

CAMPUS ACTIVITIES

2013.07 — 2014.05 *Lead Engineer,* **National College Mechanical Innovation Competition**

- Finished 80% mechanical design work and machined 2 parts by Milling Machine
- Helped the team build a precise measurement device by￥3000 using multiple sensors to measure mechanical parameters such as angle, distance, force.

2012.09 — 2014.12 *Vice-Captain,* **Honda China Eco-Mileage Challenge**

- Designed and produced a racing motorcycle with other members every year.
- Reduced the fuel consumption of the racing motorcycle from 4 mL/km to 2.28 mL/km by increasing the engine's compression ratio, reducing the friction, etc.

2012.09 — 2013.07 *Vice Liaison Minister,* **Students Art Troupe of Xi'an Jiaotong University**

2012.09 — 2013.07 *Activity Minister,* **Feeling Music Club in Xi'an Jiaotong University**

PUBLICATIONS

Journal Articles: J1. Keyu Chen, **Chang Si**, Ping Guo, "Design of a High Bandwidth Nonresonant Tertiary Motion Generator for Elliptical Vibration Texturing", Journal of Micro and Nano-Manufacturing 5 (1), 011008, Jan 2017

Conference Papers: C1. **Chang Si**, Yingjie Zhang, "Research of online measurement and inspection approaches for 2.5-dimensional workpieces", Information and Automation, 2015 IEEE International Conference on, 1926-1930, Aug 2015

Patents: P1. **Chang Si**, Qiang Zhao, Yang Liu, "Pattern code identification method and system", CN108830362A
P2. Yang Liu, **Chang Si**, Qiang Zhao, "Machine-recognizable pattern generation method and generation apparatus, and computer-readable storage medium", CN108898641A

PERSONAL

Computer Skills: C++, MATLAB, OpenCV, Python, Linux, PyTorch
Hobbies: Guitar, Piano, Singing, Reading

REFEREE

Yang Liu: yliu@glitech.com, Founder & CEO, GLI Tech

Ping Guo: ping.guo@northwestern.edu, Assistant Professor,
Mechanical Engineering, Northwestern University