

# 朱胤恒 YINHENG ZHU

✉ zhuyh19@mails.tsinghua.edu.cn · 🐮 cow8

## EDUCATION

---

**Tsinghua University**, Shenzhen, China 2019 – 2021

*M.S.* in Data Science and Information Technology

**Xiamen University**, Xiamen, China 2015 – 2019

*B.E.* in Cognitive Science, Graduated with Honor

*B.S.* in Mathematical Statistic (Minor)

GPA: 3.7/4 (top 1%)

## SERVICE

---

*GPU Cluster Administer Assistant* 2019.12 - Present

*Teaching Assistant* in Computational Photography Course, TBSI 2020 Spring

## RESEARCH

---

**Tsinghua-Berkeley Shenzhen Institute** Shenzhen, China

*Research Assistant* Supervisor: Prof. Lu FANG<sup>1</sup>

Live Semantic 3D Perception for Immersive Augmented Reality 2019.5 – 2019.9

- Make it efficient enough for mobile device via sparse data structure.
- First accuracy in Stanford 3D dataset
- Paper accepted by **IEEE VR 2020, Journal Track TVCG**[pdf].

Reference based super-resolution 2018.9 – 2019.5

- Exploring effect of various supervision signals, e.g. landmark, warping, in image flow estimation and image synthesis task.
- Paper accepted by **TPAMI**[pdf].

**SenseTime Research** Shenzhen, China 2018.6 – 2018.9

*Research Intern* Supervisor: Dr. Qiong YAN<sup>2</sup>

Neural network quantization for mobile device

- **Target:** Improve inference speed of network in integer-only DSP unit for image argumentation.
- Programming quantized linear interpolation that further improving the speed without loss on performance.

**Media Analytics and Computing Lab in Xiamen University** Xiamen, China 2017.9 – 2018.6

*Research Assistant* Supervisor: Prof. Rongrong JI<sup>3</sup>, Dr. Shaohui LIN<sup>4</sup>

Neural network quantization

- **Network Quantization:** Using low-bit fix-point representation for its acceleration and compression.
- Wrote a note about the mistake found in a NIPS paper [pdf]

**University of California, Irvine** CA, U.S. 2017.6 – 2017.9

*Research Assistant* Supervisor: Prof. Harris<sup>5</sup>

Accurate pupil tracking in the wild

---

<sup>1</sup><http://www.luvision.net/>

<sup>2</sup><http://www.yan-qiong.com/>

<sup>3</sup><http://mac.xmu.edu.cn/rjji-en.html>

<sup>4</sup><https://sites.google.com/site/shaohuilin007/home>

<sup>5</sup><http://www.ics.uci.edu/harris/>

- **Target:** Tracking pupil center in the head mounted near infrared image sequence for gaze estimation or other perceptual researches.
- Our method achieved state-of-art in accuracy. [pdf]

## PROJECTS

---

### **Tsinghua-Berkeley Shenzhen Institute** Shenzhen, China

Early Assessment of Covid-19 Severity 2020.2 – 2020.5

- Provides an easy-to-use tool[check out here] for Early Assessment of Covid-19 Severity.
- Identifies key bio-marker related to severity progression.

Human Behaviour Analysis Dataset 2019.9 – present

- Graph Neural Network for pedestrians group detection.
- Paper accepted by **CVPR 2020** [pdf].

## HONORS AND AWARDS

---

National Scholarship(0.2%), Lotus Foundation Scholarship(1%), Dean's Honor List(5%) 2017

*National 2<sup>nd</sup> Prize*, Award on National Artificial Intelligence Design Competition 2017

*Meritorious Winner*, Award on Interdisciplinary Contest In Modeling 2017

*Regional 3<sup>rd</sup> Prize*, Award on China-US Young Maker Competition 2016

## **i** MISCELLANEOUS

---

- There are some projects are hosted on GitHub: <https://github.com/cow8>