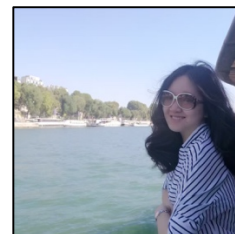


YUWEI QIU

Department of Electronic Engineering
Tsinghua University, Beijing, China
+86 13621136026 | Email: vic_thustudy@126.com



EDUCATION

Tsinghua University

B.E, Electronic Engineering

Beijing, China

Sep. 2014 – July 2018

- GPA: 87/100
- **Related Courses**
 - **Researches:** Computer Graphics (95/100), Student Research Training (95/100)
 - **Mathematics:** Calculus A (95/100)
 - **Programming:** Advanced Matlab Programming and its Application (95/100), C/C++ Computer Program Design (94/100)

PUBLICATIONS

- [1] **Yuwei Qiu**, Huimin Ma and Lei Gao. “Hardness Prediction for Object Detection Inspired by Human Vision” accepted and to be published in *International Conference of Image Graphics 2017*.
- [2] Lei Gao, Huimin Ma, Chenhao Liu and **Yuwei Qiu**, “A Human Visual Bionic Framework for Object Recognition”, accepted and to be published in *Journal of Graphics*.

RESEARCH EXPERIENCE

University of Pennsylvania (General robotics, Automation, Sensing & Perception Laboratory, Department of Computer Information Science)

Research Assistant to Prof. Jianbo Shi

Project 1: Artificial Music Composition from First Person Videos

June. 2017 – Present

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Project 2: Body Pose Prediction Based On First Person Videos

July. 2017 – Present

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Tsinghua University (Department of Electronic Engineering)

Beijing, China

Research Assistant to **Prof. Huimin Ma**, Deputy Secretary-General of China Graphics Society

Project 1: Researches of eye-tracking devices and its applications in computer vision Mar. 2016 – Nov.2016

- Theoretically quantized the human perception over scene content
- Extracted Detection Complexity, which predicts the performance of algorithms in advance
- Predicted object detection failures in *ILSVRC* with a precision of **0.94**
- Contributed to a first-authored paper, which has been submitted to *2017 IEEE Conference on Computer Vision and Pattern Recognition*

On-going: Mathematically models of psychological problems based on interactive devices Nov.2016 – Present

- Designed mental experiments for patients suffering from autism, mania and depression
- Extracted eye-tracking features, gene information and electroencephalogram for data mining
- Now attempting to mathematically model psychological diseases

Tsinghua University (Department of Electronic Engineering)Research Assistant to **Prof. Shengjin Wang**

Beijing, China

Dec. 2016 – Present

On-going: Text recognition in natural context based on convolutional neural networks

- Aims at optimizing the end-to-end text recognition with convolutional neural networks
- Now in the step of training the neural network

Stanford University (Department of Electronic Engineering)Participants in a remote project of **Prof. Tsachy Weissman**

Palo Alto, CA

Nov. 2015 – Dec. 2015

Remote project: Information theory methods for Magnetic Resonance Imaging

- Explored novel methods for medical image registration
- Connected the registration problem to recent advances in information theory and statistical signal processing
- Applied and optimized methods in information theory to medical image registration
- Completed a research demo and report (ranked **4th/146**)

Tsinghua University (Department of Electronic Engineering)

Project of Computer Graphics

Beijing, China

Apr. 2016 – Jun. 2016

Three-dimensional vector text construction and texture mapping

- Applied text segmentation in natural scenes with complex context information
- Used high-dimensional Bézier curves or B-splines to fit text in natural scenes
- Constructed and texture mapped three-dimensional models of the text based on two-dimensional graphs
- Ranked **1st/40**

Chinese Academy of Sciences, Institute of Computing TechnologyResearch Assistant to **Prof. Yongdong Zhang**

Beijing, China

Nov. 2015 – Dec. 2015

Searching by images

- Searched by local-sensitive hashing
- Tested the demo on *PASCAL VOC* contained 100,000 images and attained an accuracy of **0.95**

SELECTED AWARDS AND HONORS

Scholarship and Fellowship

- | | |
|--|------|
| • Tsinghua Scholarship (For outstanding academic, scientific and social achievement) | 2015 |
| • Tsinghua Scholarship (For outstanding social achievement) | 2016 |

ADDITIONAL INFORMATION

Interests

- Computer vision
- Computer graphics
- Cognition
- Deep learning

Computer and Language Skills

- Languages: **MatLab** (20k+ lines), **C/C++** (10k+ lines), **Python**, **C#**, **Verilog**, **MIPS Assembly Language**, **LaTeX**, **HTML**, **Linux**
- Tools: **Caffe**, **Tensorflow**, **Pytorch**
- English Skills:
TOEFL: 108 = 28(Reading)+27(Listening)+26(Speaking)+27(Writing)
GRE: 321 = 154(Verbal)+167(Quantitative)+3.5(Analytical Writing)

EXTRACURRICULAR ACTIVITIES

EE Student Union

Apr. 2016 – Present

- Chairman in charge of *External Communication Department*
- Lead a team with 27 members and raised nearly USD 10k for sponsorship

Development for Live Broadcasting of Anniversary Party in EE department

Oct. 2016 – Dec. 2016

- Team leader
- Built up a website within 3 weeks for live broadcasting with millions of audience, which none of previous staff have ever achieved
- Successfully live broadcasting the anniversary party lasting for 5 hours with over 5000 clicks

Global leadership competition 2015

Jan. 2015 – Feb. 2016

- Outstanding team captain
- Won the business design competition held at Intel, Silicon Valley.