Hao **Ju**

Undergraduate Student

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Research Intersets

Electronic Engineering Signal and Image Processing, Medical Application of Electronic Engineering, Human Computer Interaction

Education

School of Electronic Engineering, UESTC

Chengdu, P.R.China

B.Eng. In Electronic Information — *Sep. 2014 - Exp. Jul. 2018*

- GPA: 3.86/4, Average Score: 87.51/100, Ranking: 5/42.
- Honorary Graduate of UESTC
- IELTS: Total 8.0; Reading 9.0, Listening 9.0, Speaking 8.0, Writing 6.5
- GRE: Total 326; Verbal 161, Quantitative 165, Analytical Writing 3.0

Shared Reality Lab, McGill University

Montreal, Canada

Mitacs Globalink Intern — *July 2017 - Oct. 2017*

- Supervised by Prof. Jeremy Cooperstock (http://www.cim.mcgill.ca/ jer/).

Ngee Ann Polytechnic

Singapore

Short-term visiting student — *May 2017*

Publications

Pressure or Movement? Usability of Multi-Functional Foot-Based Interfaces

Second Author — *Sep. 2017*

- Taeyong Kim, Hao Ju, and Jeremy Cooperstock. 2018. In proceedings of ACM SIGCHI Conference on Designing Interactive Systems (DIS) 2018. ACM. 1219-1227.

Experience

Research and Projects

Target Recognition and Tracking based on XGBoost (Thesis)

Chengdu, China

Undergraduate Researcher, UESTC — *Oct. 2017 - May 2018*

- Developed a supervised learning based target tracking algorithm, and estimated its performance by comparing with traditional target tracking algorithms (including filtering algorithms like Kalman and LSM, and target co-relating algorithms such as JPDA and NNJPDA). Algorithm implemented in MATLAB and Python
- Paper to appear as poster presentation for IET International Radar Conference 2018

Raising the Heat

Montreal, Canada

Research Assistant, Shared Reality Lab, McGill University — *Sep. 2017 - Oct. 2017*

- A following-up research of the UIST Student Innovation Contest 2016 project "Raising the Heat", where the possibility of using Electro-Muscular Stimulation to simulate a burning-hot temperature was explored. Hardware and firmware prototype enhanced for more precise experiment results.

Usability of Multi-Functional Foot-based Interfaces

Montreal, Canada

Research Assistant, Shared Reality Lab, McGill University — *Jul. 2017 - Sep. 2017*

- In this research, we compared the performance of two mainstream foot interaction methods (foot rocking and heel-pivoted rotation) in selection and parameter controlling tasks, set in the use case of a hands-free interface designed for seated musicians.

Data Secured USB Mass Storage Device *Chengdu, P.R.China*

Undergraduate Researcher, School of Electronic Engineering, UESTC *Mar. 2017 - Present*

- Developed a data secured USB Flash Disk capable of data encrypting, sending anti-losing alerts and data retrieving.
- Ranked 7th among 125 teams in the provincial final of the National 'Internet Plus' Innovation and Entrepreneurship Competition.

Smart Pet-Keeping Kit for Arthropods and Amphibians *Chengdu, P.R.China*

Undergraduate Researcher, School of Electronic Engineering, UESTC *Aug. 2016 - May. 2017*

- A MCU-based pet-keeping kit under automatic temperature and humidity control, with manual control over network interface.

Network-based RF Device Analyzer *Chengdu, P.R.China*

Undergraduate Researcher, School of Electronic Engineering, UESTC *Mar. 2016 - July 2016*

- Developed a network-based RF device analyzer with 4 GHz bandwidth and 125 MHz baseband bandwidth based on Xilinx Virtex VC707.
- Awarded second prize of Southwest China in 2016 National College Student Smarter Connected System Innovation Competition

Other Experience

Siglent Co. Ltd. *Shenzhen, P.R.China*

Intern *Aug. 2016*

- Internship at the leading domestic oscilloscope manufacturer demonstrated the actual production process.

Technology Association for School of Electronic Engineering *Chengdu, P.R.China*

Core Member *Oct. 2014 - Dec. 2015*

- A student association dedicated to circuit design and DIY and technology innovation.
- Worked mainly on hardware design and DIY (especially communication systems: infrared, FM,etc.) and microcontroller programming.

Honors and Awards

Honors and Scholarships

Mitacs Globalink Graduate Fellowship

CAD 15,000, given to former Globalink Research Interns returning to Canada for graduate studies *Applied in Jan. 2018, Pending*

Honorary Graduate of UESTC

10% *Oct. 2017*

Renmin Scholarship 2017

First Class in 2017, CNY 1,500 (USD 226) *Oct. 2017*

National Internet Security Scholarship

CNY 30,000 (USD 4,556), 100 among all undergraduates and graduate students in China per year *Aug. 2017*

Jiuzhou Scholarship 2016

CNY 1,000 (USD 150), 2 per school per year *Sep. 2016*

Renmin Scholarship 2015

Third Class, CNY 500 (USD 75) *Oct. 2015*

Awards

2017 'Internet Plus' Innovation and Entrepreneurship Competition

Second Prize (provincial level) *Jul. 2017*

OpenHW 2016 National College Student 'Smarter Connected' System Innovation Competition

Second Prize of Southwest China Area *Jul. 2016*

National English Competition for College Students 2016

Special Prize in National Final (Class C, For non-English professionals), 0.1% *May. 2016*

COMAP Interdisciplinary Contest In Modeling

Honorable Mention, 30 % *Apr. 2016*

Relevant Skills

Programming	C, C#, MATLAB, VHDL, LaTeX, Python
Tools	Altium Designer, Quartus II, VICON, Unity 3D, AutoCAD
Embedded Systems	Arduino, STM32, MCS 8051
Languages	Chinese (native), English (fluent, IELTS 8.0), French (basic, CEFR A1, certified by Alliance Française)