

# KAI-CHIEH HUANG

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## Education

Jun 2015 B.S., Electrical Engineering, Nation Taiwan University

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## Publication

Oct 2017 **Huang, K. C.**, Huang, Y. L., & Chien, S. Y. (2017). User Experience Enhancing Filter for a Webcam Based Human Computer Interaction. In *2017 IEEE 6th Global Conference on Consumer Electronics (GCCE)* (pp. 26-27). Nagoya, Japan: IEEE.  
doi: 10.1109/GCCE.2017.8229269

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## Research Experience

### Oct 2018-Present **Research Assistant**

Advisors: Prof. Da-Yuan Huang, Bing-Yu Chen Lab: Computer Graphics Laboratory, NTU  
• Researched on new interactive haptic properties for the stylus.  
• Designed a functional special-purpose stylus prototype with Arduino and 3D printed parts.  
• Conducted literature review on various HCI topics.

### Sep 2014-Jun 2015 **Undergraduate Researcher**

Advisor: Prof. Shao-Yi Chien Lab: Media IC and System Lab, NTU  
• Built a webcam-based system enabling users to remotely control the computer with the head.  
• Devised a speed adaptive filter which enables prompt, stable interactions when using a noisy input.  
• Studied research articles on human-computer interaction, signal processing, and facial recognition.  
• Received A+'s for two Special Project courses that are 2 semester credit hours each.

### Sep 2013-Jan 2014 **Undergraduate Researcher**

Advisor: Prof. Ren C. Luo Lab: Intelligent Robot and Automation Lab, NTU  
• Explored ways the humanoid robot Nao can assist the elderly people in everyday activities.  
• Studied research articles on humanoid robots and their applications.  
• Received an A+ for a 2 semester credit hour Special Project course.

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## Application and System Design Experience

### Nov 2017-Apr 2018 **Office Assistant**

*South Africa Cape Town Mission, The Church of Jesus Christ of Latter-day Saints*  
• Created an effective online system for computer novice to report and read performance statistics.  
• Maintained the system frequently according to the feedbacks from users of various backgrounds.

### Nov 2016-Dec 2016 **Office Assistant**

*Taiwan Taichung Mission, The Church of Jesus Christ of Latter-day Saints*  
• Explored the challenges computer novices face when performing tasks on the computer.  
• Established an entry portal from which computer novices may accomplish other computer tasks.

### Sep 2014-Jan 2015 **Contestant**

*2015 Innovate Asia FPGA and SoC Design Contest, Altera*  
• Explored ways to satisfy a person's information needs at the beginning of a day.  
• Designed an interactive device with an FPGA to assist the user in selecting an outfit combination.

### Jul 2014-Aug 2014 **Intern**

*IC Realization Division, MediaTek Inc.*  
• Cooperated with colleagues to understand the limitations of the IC design environment.  
• Improved the UI/functionalities of the IC design environment used by the IC Realization Division.

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## Honors and Awards

### Oct 2015 **Presidential Award, 2<sup>nd</sup> Semester 2014/2015 at National Taiwan University**

Top 5% overall semester GPA among all seniors in the Electrical Engineering Department.

### Jan 2015 **Semi-finalist, 2015 Innovate Asia FPGA and SoC Design Contest**

Top 30 in Taiwan in an international digital consumer product design competition.

### Dec 2014 **Gold Medal, 2<sup>nd</sup> NTU Presentation Contest**

Top 3 in a national competition where contestants present prepared speeches with visual aids.

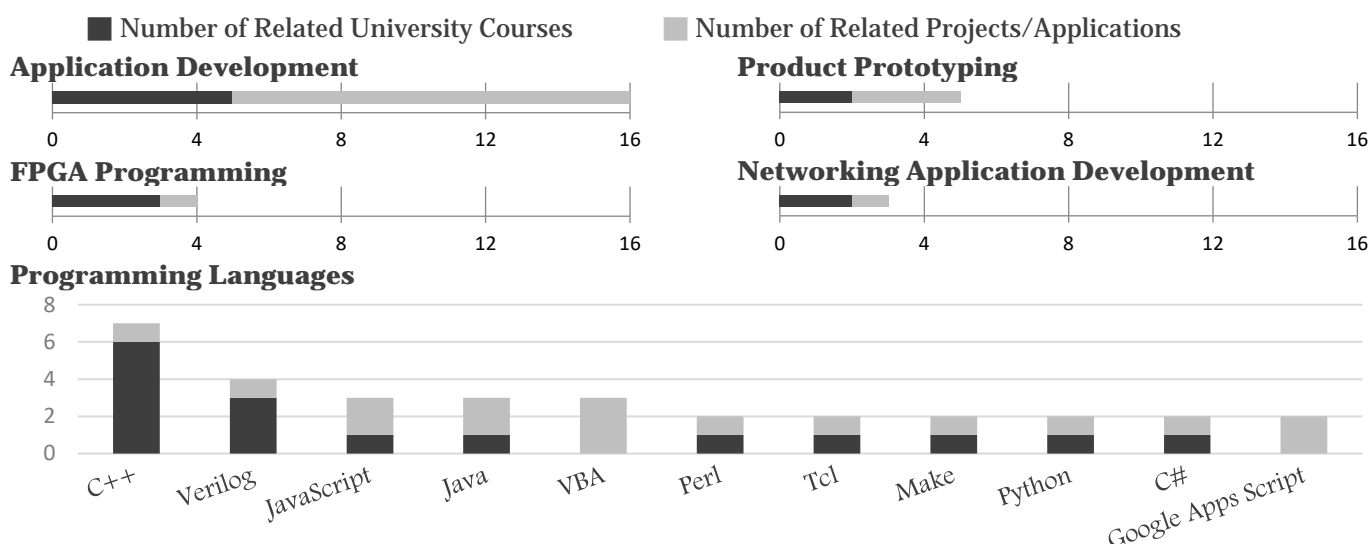
### Jan 2014 **Outstanding Award, 2014 National Electromagnetics Proficiency Test**

Top 4% in the national college-level electromagnetics aptitude test for students in related fields.

### Jul 2011 **Silver Medal, 2011 International Young Physicists' Tournament**

4<sup>th</sup> in a team competition where representatives from 21 countries present and defend their research.

## Skills



## Leadership

Nov 2017- Apr 2018	<b>Assistant to the President</b> <i>South Africa Cape Town Mission, The Church of Jesus Christ of Latter-day Saints</i> <ul style="list-style-type: none"><li>Led 8 pairs of zone leaders to oversee the entire 90-man organization.</li></ul>
Dec 2015- Jul 2016	<b>Second Lieutenant Chief Counsellor</b> <i>39<sup>th</sup> Chemical Regiment, Republic of China Army</i> <ul style="list-style-type: none"><li>Resolved interpersonal conflicts and physical and mental issues within a company of 50 soldiers.</li></ul>
Jun 2013- Jun 2014	<b>Tennis Team Captain</b> <i>Electrical Engineering Department, National Taiwan University</i> <ul style="list-style-type: none"><li>Established the team's new leadership organization, consisting of three vice captains.</li><li>Coordinated with and delegated tasks to the vice captains to successfully run a team of 40 players.</li></ul>
Jul 2012- May 2014	<b>Young Single Adults Representative</b> <i>Hsinan Ward, The Church of Jesus Christ of Latter-day Saints</i> <ul style="list-style-type: none"><li>Represented approximately 20 young adults in meetings to voice the needs of the population.</li></ul>
Feb 2012- Jun 2012	<b>Vice President</b> <i>National Taiwan University Club, Toastmasters International</i> <ul style="list-style-type: none"><li>Founded a new team that organized programs related to or involving international students.</li></ul>
Mar 2011- Jul 2011	<b>Physics Team Captain</b> <i>Taiwan Representative Team, International Young Physicists' Tournament</i> <ul style="list-style-type: none"><li>Oversaw the team's research progress during the months of preparation for the tournament.</li><li>Conducted team discussions.</li></ul>

## Teaching Experience

Sep 2014- Jan 2015	<b>Math and Science Tutor</b> <i>Free Tutoring Program for Disadvantaged Students, National Taiwan University</i> <ul style="list-style-type: none"><li>Helped individual disadvantaged students receive academic assistance they could not afford.</li></ul>
Sep 2012- Jun 2014	<b>Workshop Speaker</b> <i>National Taiwan University Club, Toastmasters International</i> <ul style="list-style-type: none"><li>Taught English grammar and pronunciation in sessions with approximately 20 participants each.</li></ul>
Sep 2011- Jan 2012	<b>Math and Science Tutor</b> <i>Chong De Volunteering Club, National Taiwan University</i> <ul style="list-style-type: none"><li>Assisted individual elementary students to receive academic assistance they could not afford.</li></ul>

## Extracurricular Activities

Sep 2013- Jun 2015	<b>CAD and 3D Printing Hobbyist</b> <ul style="list-style-type: none"><li>Contributed designs of consumer products onto Quirky.com, a crowd-sourced invention platform.</li><li>Designed and printed multiple prototypes/objects with a self-assembled 3D printer.</li></ul>
Jul 2013- Aug 2013	<b>Representative of Taiwan, International Youth Forum Seliger, Russia</b> <ul style="list-style-type: none"><li>Cooperated with people from eight different countries in daily missions and activities.</li></ul>
Jul 2012- Aug 2012	<b>Co-organizer, NTU and Guan-Xi University Joint Service Project, Mainland China</b> <ul style="list-style-type: none"><li>Cooperated with students from the top university in Guan-Xi, Mainland China.</li><li>Organized and executed two one-week summer camps for high school students.</li></ul>