# Kai 'Kay' Wu

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## **EDUCATION BACKGROUND**

Bachelor of engineering in Science and Technology of Electronic Information, BUPT

• Department: School of Electronic Engineering, School of Peida-Ye [1] Sep. 2010 - Jul. 2014 (expected)

- GPA & Rank: Cumulative GPA: 3.58/4 (cumulative GPA of Peking University) Average Score: 86.4/100 Ranking: 15/115
- Standard Tests: GRE: 328(V 158, Q 170) AW 4 TOEFL: 106(Reading 29, Listening 26, Speaking 22, Writing 29)
- Honors: Second-class scholarship third-class scholarship of BUPT

  Oct. 2011, 2012, 2013

# RESEARCH AND PUBLICATION

## **Algorithm of Hand Extraction and Recognition**

Sep. 2013 - Present

Research Intern in Institute of Microelectronics, Tsinghua University, supervised by Prof. Xiang Xie and Ph.D. Yiyi Ren.

- Develop algorithm to extract and recognize hand postures for human-computer interaction applications.
- Working on a paper regarding the topic of hand posture extraction and recognition algorithm for potential publication.

## **PROJECTS**

# Classroom Seats Inquiry System - course project of Embedded System Design class

Mar. 2013 - May. 2013

Designed to help students find available seats by real-time recording number of people with sensors, updating data on server via wireless network (incomplete), and fetching data with a mobile app.

- Independently developed a mobile app, established a database server for the app & hardware to fetch/update data.
- Worked on presentation materials from scratch, successfully made a presentation to the class.

#### Wi-Fi Based Classroom Interaction System

Sep. 2012 - May. 2013

Aimed to strengthen the interaction between lecturers and students. Consists of a mobile app and a PC program which can communicate through a Wi-Fi network. Answers to multiple-choice questions or problems (text) are sent to PC using the app. Answers viewed dynamically in histogram, analyzed to evaluate and track students' performance. Problems viewed and stored on PC. No web server or database whatsoever needed, highly portable. Won **second place** in the award - *The Most Popular Exhibits* - voted by students. Currently being used.

- Independently developed the software system (mobile app & PC program), co-designed UI.
- Skills include Java network (Socket) & Swing, multi-thread, and Android programming.
- Made a presentation to a class from a top high school in China (The High School Affiliated to Renmin University of China).
   Primary presenter of the exhibits.

Musical Robot Sep. 2011 - May. 2012

This robot is a member of a musical robot band in which each member is capable of playing one instrument. Ours can play violin as well as practice Tai Chi.

• Developed C++ programs to run on Windows CE platform to make the robot practice Tai Chi.

#### **CONTESTS**

# National Undergraduate Electronic Design

Sep. 2013

A national contest for circuit design and embedded system development which held every 2 years. The development platforms used included SCMs (Silicon Labs C8051F, Renesas RL87/G13) and **Xilinx FPGA Spartan 6**.

- Recipient of Second Prize in Beijing Contest District among 457 teams.
- Skills in SCM programming (serial communication, ADC/DAC, keyboard, LCD display, etc.). Solid knowledge of HDL, development experience of FPGA including use of IP cores (e.g. FFT).

CUMCM, MCM Sep. 2012, Feb. 2013

Used MATLAB to code and solve mathematical models to evaluate the quality of wines and grapes (CUMCM). In the MCM (optimal shape and layout of pans) constructed the model to solve layout problem, wrote codes to all models, wrote part of the English essay, and polished the final writing. Recipient of Successful Participant in both contests.

## **COMPUTER SKILLS**

Proficient: C, Java (Swing), Verilog • Familiar: Java (Socket, multi-thread), Android, C++, PHP, MySQL

Software: MATLAB, ISE, Quartus, WinCE 6.0+Microsoft VS2005, Eclipse (ADT plugin), Vim

[1]. Department instituted to nature talented students in telecommunication and electronic engineering, named after the honorary president, expert in microwave and optical communication, Mr. Peida Ye.