Bingcheng Hu

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EDUCATION

University of Michigan–Shanghai Jiao Tong University Joint Institute (JI) Shanghai, China

B.S. in Electrical and Computer Engineering **Last Two years GPA:** 3.5/4.0 Sept. 2016 - Present

Minor in Data Science

Courses in Progress:

- Ve445 Introduction to Machine Learning
- Ve572 Methods and Tools for Big Data
- Ve492 Artificial Intelligence
- Vv414 Bayesian Data Analysis

Sophia University Tokyo, Japan

Winter Term Exchange Program **GPA:** 3.67/4.0 Feb. 2018 – Mar. 2018

PUBLICATIONS

- **B.C. Hu**, T, D., Y, P., M, Z., and Q, Y. (2019). "A flexible, Attachable and Low-cost IMU-based Motion Capture System for Measurement of Hand Kinematics." Biomedical Signal Processing and Control (under review)
- Y, P., X, S., L, L., **B.C. Hu**, and M, Z. (2019). "Hand Kinematics in Badminton Based on Smart Glove and Visualization Technology." Sensors (under review)

RESEARCH EXPERIENCES

- Collaborative Information Systems Lab - Shanghai Jiao Tong University, Prof. Cao Shanghai, China

Project II: Research on Sentiment Analysis and Work Efficiency based on GitHub Mar. 2019 – Present

- Built a crawler to pull requests from the Ruby community on GitHub and saved data in SQL database
- Analyzed the impact of sentiment consistency on the collaboration efficiency among developers

Project I: Recommender System Design based on Machine Learning *- Team leader* Oct. 2018 – Present

- Designed a web crawler and crawled all the data on the OpenML website
- Trained the data and created a tag-based recommender system

- Department of Physical Education and Sports Science - Zhejiang University, Prof. Peng Hangzhou, China

Project II: Gesture Sensor with Six-Axis Gyro Control Design *- Research Assistant* Jan. 2018 – May 2018

- Proposed IMU-based motion capture system, designed PCB boards with Altium
- Soldered and wired the device, manufactured a 3D printed shell with Solidworks
- Coded in C++ and Java for 3000+ lines to acquire, transmit, and post-process data

Project I: Hand Kinematics IMU-based Motion Capture System Design Oct. 2017 – Feb. 2019

- Developed a data processing system independently in Java for 3D force sensor
- Designed and manufactured a gesture sensor with a bending sensor
- Created a gesture sensing device on inertial sensors MPU6050 and MPU9250

SELECTED PROJECTS EXPERIENCES

- Course: Introduction to Computer Organization *- Team Leader*

Simulation and Implementation of 32-bit MIPS CPU Sept. 2018 – Dec. 2018

- Modeled both single-cycle and 5-stage pipelined MIPS Architecture CPU in Verilog HDL to process data
- Synthesized the design with Xilinx and implemented the pipelined CPU on FPGA board free of error

- SJTU-Company Innovation Practice Program for Undergraduates *-Team Leader*

Smart Light Bulbs Remote Control Design Nov. 2017 - Nov. 2018

- Designed a lighting device with AutoCAD for indoor photography on ESP8266 board
- Wrote an Android app to remote control smart light bulbs through the internet

AWARDS & HORNORS

University Scholarship for Merit Student, SJTU	Scale: < 5%	2018-2019
University Third Scholarship for Academic Excellency, SJTU	Scale: 20%	Nov. 2019; Nov. 2018
University Academic Improvement Scholarship	Scale: 5%	Nov. 2018
2018 China-US Young Maker Competition (Shanghai) second prize	Scale: 2/30	Sept. 2018
2018 VEX Robot Shanghai Division Selection Competition first prize	Scale: 1/20	Jul. 2018

The 8th University Engineering Comprehensive Ability Competition first prize Scale: 3/40 June 2018

PROFESSIONAL SKILLS

- Programming Language: MATLAB, C++, C, Python, Verilog HDL, MIPS Assembly
- Software: OrCAD, DataGraph, Mathematica, Xilinx, AutoCAD, CTex, Qt, Solidworks, Altium Designer
- Operating System: Linux, Android, iOS, macOS
- Skills: Native in Chinese; Fluent in English; Basic in Japanese