

# Yu JIANG

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## EDUCATION

### Carnegie Mellon University

May 2021

*B.A. in Global Studies, Minor in Computer Science, Minor in Intelligent Environment (QPA: 3.70/4.0)*

#### • Relevant Courses:

Differential Calculus	Principles of Computing	Parallel and Sequential Data Structures and Algorithms
Reasoning Data	Creative Kinetic Systems	Fundamentals of Programming & Computer Science
Matrix & Linear Transformation	Principles of Functional Programming,	
Introduction to Probability Theory	Introduction to Computer Systems	

#### • Technical Skills:

Proficient in Python, C, Arduino, Autodesk Fusion 360, Java, Git, Android Studio, Final Cut Pro; familiar with R, Metashape

#### • Honors & Awards:

CMU Summer Research Undergraduate Fellowship 2020 (\$3,500); Dean's List (Fall 2017, Spring 2018 with High Honors, Fall 2019 with High Honors)

## RESEARCH PROJECTS

### Research on Theory and Method of Affective Computing in Human Habitats

Oct 2020 - present

*Research Intern for Tsinghua University Future Lab (with Prof. Yingqing Xu), Beijing*

- Designate camera location in an unfinished house to maximize the space of captured human pose videos
- Set up human habitat environments in the lab based on dimensions in the house and collect video data on human poses
- Develop affective computing algorithms and compute on human pose data collected
- Work on paper submission

### Accessible, Efficient, Interactive Text Reader for Visually Impaired People

July 2020 - present

*Research Assistant for Tsinghua University Pervasive Computing Group (with Prof. Chun Yu), Beijing*

- Identify inefficiencies and flaws in current text reading apps for academic reading designed for visually impaired people
- Design and develop new Android reading apps and accompanying hardware (e.g. 3d printed phone cases) to assist reading
- Test the effectiveness of developed apps feedback from the users to further improve the designs
- Work on paper submission to UbiComp

### Surface Acoustic Wave Devices for Self-powered Sensing & Interaction

Sept 2019 - August 2020

*Research Assistant for CMU Human Computer Interaction Institute Dev Lab (with Prof. Scott Hudson), Pittsburgh*

- Characterized, printed and tested new sensor boards using direct-wire printed sensors (i.e. printing with novel conductive inks)
- Collected and visualized continuous signals using NanoVNA, GNU radio and Python
- Developed and trained machine learning pipeline to identify signals (solids and liquids) in real time
- Worked on paper submission

## INTERN EXPERIENCE

### Merck Holdings Limited, Buy & Pay Services, Shanghai

July 2019 - August 2019

*Data Analyst Intern*

- Analyzed payment patterns for invoices received by Merck globally
- Developed a model for predicting whether a future payment would be late or on time
- Improved payment on-time rate by 5% using the model during trips to Manila, Philippines

### CyberMiles Foundation Limited, Shanghai

July 2018 - August 2018

*Technical Department Intern*

- Wrote and tested instructions on accessing the company's blockchain node
- Created and managed technical set-up instruction contents for CyberMiles' Youtube channel
- Developed a user interface website for blockchain FOMO (Fear of Missing Out) game for the company

## COURSE PROJECTS

### Hands-Free Balance Maze (video demo)

Nov 2020

*Team Project for course 16223: Creative Kinetic Systems*

- Implemented CAD design, laser cut, and assembled a two-axis gimbal set for a marble ball balance maze
- Parsed users' hand position inputs from two sonar sensors to control the rotation of two axis
- Transmitted remote input from mqtt bridge or an app to allow remote gameplay

### Beats of Isaac (video demo)

May 2018

*Individual Project for course 15112: Fundamentals of Programming & Computer Science*

- Redesigned the game The Rebirth of Isaac to incorporate music in determining the game's rewards and punishments
- Used pyaudio to analyze beats' amplitude and established correspondence with different game items
- Added customizable features into the game (obstacles on game board and imported music)