Yanqi Liu

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EDUCATION **UNIVERSITY OF MICHIGAN** **Ann Arbor, MI**

- **College of Engineering May, 2017 GPA: 3.92/4.00**
- BSE in Computer Engineering, Minor in Business
- Honors: Engineering Dean's list, James B. Angell Scholar, University Honors

COURSE Computer Vision (A+), Embedded Control, Introduction to Computer Organization, Programming and Data Structure (A+), Data Structure and Algorithm, Signal Processing

EXPERIENCE **APRIL Lab** **Ann Arbor, MI**

Jun 2015-Present **Undergraduate Researcher**

- Utilized camera installed on robotic car to detect drivable area
- Devised HSI color detection algorithm with the implementation of illumination invariant to remove shadow interference achieving 90% accuracy
- Implemented Sobel edge detection method for indoor corridor area detection for up to 97% accuracy
- Enhanced research skills in data labeling, statistical analysis and paper writing

Fall 2015 **EECS 442 Class Project**
Hand Augmented Reality

- Implemented real-time program to utilize webcam to display 3D object in sync with pose of hand
- Utilized OpenCV implementations to achieve hand segmentation, contouring and camera pose estimation
- Developed cross-frame figure tip tracking method to stabilize object display

Summer 2014 **INTERNSHIP- A2B BIKESHARE** **Ann Arbor, MI**
Electrical Engineer

- Enhanced low-level programming skills through programing for decoding GPS command and communicating with other device using I2C
- Designed and programmed GPS tracker using cellular module to retain GPS information
- Learned programming in Arduino, AVR C and circuit board design using EAGLE
- Exercised engineering skills as well as skills in marketing and selling

Fall&Winter 2013 **Undergraduate Research Opportunity Program- APRIL Lab** **Ann Arbor, MI**
Research Assistant

- Developed calibration system with camera and laser pointer to increase calibration accuracy for low-cost robotic building
- Developed forward and inverse kinematics algorithm using VIS to control arm gesture to reach object in given position
- Implemented image processing method to detect brightest spot of video stream
- Exercised research skills and teamwork experiences through weekly programing tasks

2012-2015 **BLUELab-HAGLEY GAP** **Ann Arbor, MI**
Financial Chair

- Acquired financial experiences and skills of planning team budget, planning for travel for 6 people and applying for university funding for $4000
- Traveled to Jamaica in May, 2013, built three Bio-sand filters, taught SODIS lessons in Minto school and tested the water quality in the area
- Enhanced collaborative ability by designing, testing and building with a group of engineers with different engineering backgrounds

Jan. 2016-Present **EECS 370 Instructional Aide** **Ann Arbor, MI**

- Taught 1-hour discussion and 3-hour office hour every week
- Designed homework and exams and answered questions on Piazza

ADDITIONAL Computer: C++, C, Java, Matlab
Professional Organizations: member of IEEE and HKN