Zixuan (Vincent) Yao

☐ (443) 248 1167 | ✉ yao@jhu.edu | ⌨ yaozixuan | in yaozixuan

Education

Johns Hopkins University, *GPA 3.94*   *Baltimore*

WHITING SCHOOL OF ENGINEERING,   *MSE in Computer Science*   *Aug. 2019 - Dec. 2020*

- *Relevant coursework:* Object-Oriented Software Engineering, Algorithm, Computer Networks, Natural Language Processing, Machine Learning, Deep Learning, Human-Computer Interaction, Human-Robot Interaction

The Chinese University of Hong Kong, *GPA 3.79*   *Shenzhen*

SCHOOL OF SCIENCE & ENGINEERING,   *BEng in Computer Science*   *Sep. 2015 - Jun. 2019*

- BEng with Honors, **First Class,** ranked **top 5%** in the school
- *Relevant coursework:* Distributed & Parallel Computing, IoT, Software Engineering, Operating Systems, Computer Architecture, Microprocessors & Computer Systems, Optimization, Database Systems, Data Mining, Data Structure

National Tsinghua University, *GPA 3.75*   *Taiwan*

EXCHANGE IN COLLEGE OF ELECTRICAL ENGINEERING & COMPUTER SCIENCE   *Sep. 2017 - Jan. 2018*

Skills

- **Programming Languages**: Java, C/C++, Python, SQL, R, Go & Assembly
- **Web Development & Database**: React, Javalin, JavaScript, HTML5, CSS, PostgreSQL, SQLite
- **Other Tools & Libraries**: Git, SSH, CLI, Vim, Docker, PyTorch, TensorFlow, Pthread, MPI, CUDA, LaTeX

Internship & Project Experience

Web Development, *Object-Oriented Software Engineering*   *Feb. 2020 - May. 2020*

- Jointly developed a web application: ⌨ Quiz Hero by **React** and **PostgreSQL** to slove the problem of using iClicker or swiching apps to take a quiz in class. Streamlined the user story of presenting materials with organizing quizzes.
- Designed the front end skeleton, utilized promise and setState to properly respond to user actions.
- Parse and convert Markdown raw to an integrated presentation (PPT-like) with interactive quiz pages.

Software Development, *Programming Paradigms Capstone Project*   *Mar. 2019 - May. 2019*

Developed a cross-platform desktop application: ☐ BrainLine by **Qt** in **C++**

- to slove the problem of unable to freely designed the mind map.
- Designed the Graph User Interface by Qt Creator and Node-Arc data structures by Node.js to store all the data.
- Streamlined signal-slot mechanism to initialize interaction between front end and back end.

Technical Support Engineer, *HUAWEI terminal Co., Ltd.*   *Jun. 2018 – Aug. 2018*

- Managed the Technical Announcements for HUAWEI terminal products, including release, maintenance & archiving.
- Coordinated R&D Engineers with production line to resolve customer technical problems in a timely fashion and proposed potential detailed solutions to address customer concerns.
- Addressed the inner search engine mismatch problem by analyzing keywords and hyper links between keywords.

Game Development, *Microprocessor System Laboratory*   *Apr. 2018 - May. 2018*

- Developed a bouncing ball game on an **ARM® Cortex®-M3 STM32 MCU** development board with **Keil® MDK-ARM** tool from the bottom: register level configuration and development.
- Handled the IO communication by designing proper interrupt and exception mechanism.
- Implemented several functions: leveling functionality, human computer interaction and reward system.

Research Experience

Research on Automatic Hybrid Sailboat Development   *May. 2018 - May. 2019*

State Joint Engineering Laboratory on Robot and Intelligent Manufacturing

- Constructed an energy optimized Autonomous Surface Vehicle (ASV) for long-term ocean cruise with Raspberry Pi. Achieved the seamless real-time communication between the Raspberry Pi and PC using python.
- Integrated EVM and IMU sensors with Raspberry Pi to collect essential data from ASV. Designed a real-time feedback algorithm to control the ASV's cruise trajectory according to the collected ASV's attitude information.
- Analyzed the energy data and cruise trajectory to optimize the energy usage with the chosen heading angle.
- **Publication:** Z. Zhang, Z. Yao, Q. Sun et al ⌨ 'Energy Optimization Based on Automatic Hybrid Sailboat' **Oral**: 2018 IEEE International Conference on Robotics and Biomimetics in Kuala Lumpur, Malaysia