

YILIU LI | AIDEN

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GITHUB: <https://github.com/yiliu-li>

PERSONAL WEBSITE: yiliu.space

EDUCATION

SHANGHAI GUANGHUA QIDI COLLEGE | Shanghai | 08/2019 – 06/2023

- IGCSE: Mathematics, Economics, Computer Science, Physics, Chemistry
- A-Level: Mathematics, Further Mathematics, Computer Science, Physics

UNIVERSITY COLLEGE LONDON | London | 09/2023 – 06/2026

- BSc Computer Science
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LANGUAGES & SKILLS

Languages

- Native in Chinese (Mandarin, Cantonese), Fluent in English, Beginner in Spanish

Skills

- Python, PyTorch (Machine Learning), Haskell, Java
 - C, C++, CUDA Multi-Threaded Programming, Arduino
 - HTML, CSS, JavaScript, React, Node.js
 - Picture Editing: Adobe PS, CAD, Adobe AI
 - Video Editing: Adobe PR, FCPX, Adobe AE, DaVinci, iMovie
 - Music Editing: GarageBand, Logic Pro, Mainstage
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EXTRA-CURRICULAR EXPERIENCES

05/2023 – Ongoing

Project in developing a sleep stage detection model using LSTM

- I am developing a smart alarm app to address oversleeping issues, by automatically detecting user's sleep stage and alarm at their light sleep.
- For the algorithm used, I developed a sleep phase classification model using the Machine Learning Long Short-Term Memory (LSTM) technique, resulting in a high accuracy of sleep stage prediction.

06/2023 – 08/2023

Research in High-Performance Computing at UCR Supercomputing Lab

- Focusing on optimizing GPU-accelerated kernels, I made a remarkable breakthrough in creating the fastest algorithm for computing SDOT. I successfully enhanced kernel efficiency and minimized data movement by leveraging CUDA programming and innovative techniques.
- The source code of my SDOT Kernel can be found at: <https://github.com/yiliu-li/Optimized-Cuda-SDOT-Kernel-on-NVIDIA-Turing-GPUs>

05/2022 – 07/2022

Projects in designing and assembling a Fingerbot

- Refraining from touching public facilities is key to epidemic prevention and control. To address it, I made an automatic fingerbot, a wireless tiny mechanical arm that can operate a switch or button without any physical touch to the switch, with a sensor to detect a "pressing down" gesture.
- I wrote the program to the chip by Arduino, a C++-based coding platform that encloses plenty of Internet of Things (IoT)-related libraries.
- To tune the parameters for gesture detection, I collected the rate of variation in the data sampled by the sensor while constantly repeating the gesture.
- On my campus, the installation of the fingerbot on the buttons of the lifts has allowed the use of the lifts without any touch.

12/2021 – 04/2022

Projects in designing and assembling an external water-cooled radiator for laptops

- I was inspired to make a water-cooled kit that pumps water from the tank into the copperplate placed under the laptop to bring out the heat from the copperplate given by the bottom surface of the laptop.
- I designed a 3D-printed enclosure with techniques of mortise-tenon connection by using CAD, a circuit board, and the waterway.
- After assembling it, I tried to run a stress test program to test the efficiency of the facility, and I found that the CPU temperature had successfully lowered.