YILIU (AIDEN) LI

London, England | +44 (0)7999-398-396 | yiliuli2006@gmail.com | 03/2006
https://github.com/yiliu-li | https://yiliu.space/

EDUCATION

UNIVERSITY COLLEGE LONDON *09/2023 – Present*

BSc Computer Science

- Object-Oriented Programming, Principle of Programming, Algorithms, Theory of Computation, Introduction Mathematics, Discrete Mathematics, Engineering Challenge, Design and Professional Skills

SKILLS

Programming Languages

- Python, C, C++, Java, JavaScript, HTML, CSS, Haskell, SQL

Development Tools

- CUDA, Arduino
- PyTorch, TensorFlow, NumPy, Matplotlib, Pandas
- React, Node.js
- Bash, Git

EXPERIENCES

Teaching Assistant *09/2024 – Present*

UCL ENGF0034 Design and Professional Skills I (Computer Science)

- Assisted in delivering course content and hands-on workshops for undergraduate Computer Science students, focusing on engineering applications of programming.
- Assisted students with programming in engineering, AI game autoplayer development, and debugging techniques.
- Provided support in understanding internet protocols and real-world networking applications.
- Supported students in developing practical programming projects, fostering a deeper understanding of Computer Science in engineering contexts.

Research Assistant *08/2024 – Present*

UCL Computer Science Multi-Sensory Devices (MSD) Group

- Contributed to research on kinesthetic illusion through literature review, and experimental support.
- Assisted research on mid-air haptics through trial-based experimentation and material reading.
- Supported in preparing presentations and research summaries.

PROJECTS

SightLink – UCL IXN Project *10/2024 – 03/2025*

- Collaboration with Soundscape, Wheelchair Alliance, and Esri.
- Utilizing YOLO OBB for precise zebra crossing detection and geolocation from satellite imagery, optimized to enhance accessibility solutions for disabled individuals.

Bioreactor Development *10/2023 – 01/2024*

- Designed a bioreactor for the manufacture and storage of BCG vaccine used in Uganda.
- Developed a web dashboard for real-time monitoring of the bioreactor using **React** and built a Wi-Fi IoT platform by integrating **ESP32**, **STM32**, and **Arduino**.

CUDA Accelerated SDOT Kernal Development at UCR Supercomputing Lab *06/2023 – 08/2023*

- A breakthrough was achieved in creating an innovative algorithm for computing SDOT by optimizing **GPU-accelerated** kernels, enhancing efficiency, and minimizing data movement through **CUDA** programming and innovative techniques.
- Source code: https://github.com/yiliu-li/Optimized-Cuda-SDOT-Kernel-on-NVIDIA-Turing-GPUs

Sleep Stage Detection Model using LSTM *04/2023 – 06/2023*

- Developed a smart alarm app to address oversleeping issues, by automatically detecting user's sleep stage and alarm at their light sleep.
- Developed a sleep phase classification model using Long Short-Term Memory (LSTM), resulting in a high accuracy of sleep stage prediction.

Touchless Fingerbot *05/2022 – 07/2022*

- Designed a touchless fingerbot to prevent virus spread by operating switches or buttons without physical contact, using a sensor to detect gestures.
- The fingerbot installation on lift buttons on campus enabled touchless lift use.