

ZHUYI LU

Sydney, NSW

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EDUCATION

Bachelor of Engineering Honours (Software)- Honours Class I - WAM: 80 <i>The University of Sydney</i>	02 2020 – 12 2023 <i>Sydney, Australia</i>
Summer Research <i>The University of Sydney</i>	12 2023 – 03 2024 <i>Sydney, Australia</i>
Master of Philosophy (computer science) <i>The University of Sydney</i>	03 2024 – Now <i>Sydney, Australia</i>

RESEARCH

Ultrasound Machine Learning <i>Biomedical Data Analysis and Visualisation (BDAV) Lab</i>	12 2023 – Now <i>School of Computer Science, University of Sydney</i>
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- Researcher in Biomedical Data Analysis and Visualization Lab, USYD. Focused on ultrasound imaging processing and texture analysis in a joint initiative between the University of Sydney and Nepean Hospital. Work encompasses clinical applications, computer science, and statistical analysis.

Ultrasound Machine Learning <i>Thesis Research Project</i>	12 2022 – 12 2023 <i>Sydney, Australia</i>
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- Analyzed sub-brain structures from 18-22 weeks fetal brain ultrasound images by conducting a pipeline with sub-region segmentation, texture analysis, etc. Mainly focus on the cerebellum and thalamus. Developed a novel segmentation algorithm.

TRANSFERRABLE SKILLS

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|-----------------|-------------------|------------------------|---------------------|
| • Leadership | • Cooperation | • Organizational Skill | • Critical Thinking |
| • Communication | • Problem Solving | • Adaptability | |

TECHNICAL SKILLS

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|---|------------------------------|--------------------------------|-------------------------------------|
| • Deep Learning (DL) & Artificial Intelligence (AI) | • Cloud Computing | Management | • System Programming |
| • Software Development | • Web Development | • Data Structures & Algorithms | • Object-Oriented Programming |
| • Software Construction and Design | • Agile Software Development | • Operating Systems | • Database Management System (DBMS) |
| | • Data and Information | • Embedded Systems | |

INTERNSHIP

HairCoSys <i>Software Developer Internship</i>	12 2022 – 02 2023 <i>Hong Kong, China, Remote</i>
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- Image recognition and image processing
- data development pipeline from data extraction, blending, cleansing, and processing to model creation and result visualization
- Assist in the execution of R&D projects

WORK EXPERIENCE

University of Sydney <i>Academic Tutor</i>	02 2024 – Now <i>Sydney, Australia</i>
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- HTIN5006: Foundations of Healthcare Data Science
- INFO5992: Understanding IT Innovations

PRIZES AND SCHOLARSHIPS

Vice Chancellor's Global Mobility Scholarship, 2021 (Bachelor of Engineering Honours)

Vern Kenna Awards in Electrical Information Engineering, 2023 (Bachelor of Engineering Honours)

the Dean's List of Excellence in Academic Performance, 2023 (Bachelor of Engineering Honours)

CERTIFICATES

AWS Solution Architect - Associate

PROJECTS

TripMasterPro [↗](#) | HTML, JavaScript, CSS, MYSQL, ReactJS, SpringBoot **10 2023**

- TripMasterPro provides a one-stop travel platform, allowing users to arrange travel not only at home but also in a single website. We provide functionalities and features from destination choosing to detailed trip planning. In order to maximize user customization of their own travel, we also offer features like trip bundle personalization.

Webike - Web Development [↗](#) | Python(Django), HTML, JavaScript, CSS, SQL **08 2022**

- Webike is a shared car rental website, the target users are tourists or international students who have just come to Australia. Users can select and then rent or buy a bike according to their needs. User can also set himself/herself to be a merchant as well.
- https://github.com/zhlu4172/WebDev_Bike

Unigram - Web Development [↗](#) | Python(Django), HTML, JavaScript, CSS, SQL **08 2022**

- Unigram is a free and futuristic social platform designed for all university communities to share photos among students. It is inspired from Instagram and Discord, as well as includes special features such as anonymous posts to create more remarkable and exceptional user experiences. It is absolutely the perfect and easiest way to share their unique and important moments, express their emotions and even ask for help.
- Live Chat Channel Feature is also available in this web – using Django Channel
- https://github.com/zhlu4172/WebDev_Uni

Booking Management System(GUI included) [↗](#) | Java, HTML, CSS, JavaScript **11 2021**

- The booking management system mocks the booking and payment process when the customer buy the tickets for movies. Customer can register and login to the system to book the movie they want to watch.
- Agile development were used through out the whole project.
- <https://github.com/zhlu4172/MuseumMangementSystem>

WebSite development [↗](#) | Python, Flask, HTML, CSS, JavaScript, PostgreSQL **11 2021**

- The website we developed is similar to the netflix official website, users can log in and choose movies, TV shows or songs. The movies, TV shows can be filtered by release year, etc.
- <https://github.com/zhlu4172/SQL-Flask-Exercise-project>

Weather Checking System(Tests included) [↗](#) | Javafx, Swing, FXML, SQL **05 2022**

- This project is to create an application by using the web api. People can search the weather around the world and cache.
- FXML for the front end and java for the back end.
- MVC used in the project
- SQLite for the database
- <https://github.com/zhlu4172/checkWeatherProjectAPP>

My Virtual Stack [↗](#) | C, Shell

03 2021

- In this project, I emulate a virtual machine to store and reference variables and stack frame contexts before reading a set of pseudo assembly instructions that dictate the operations that are performed on the stack.
- <https://github.com/zhlu4172/My-Virtual-Stack>

My Virtual Heap [↗](#) | [C](#)

04 2021

- In this project, I implemented a simple dynamic memory allocator with a similar interface to the standard library functions (such as malloc).
- <https://github.com/zhlu4172/My-Virtual-Heap>

Prochat [↗](#) | [C](#)

05 2021

- In this project, I developed a localised chat server that will support a number of clients through named pipes (FIFOs). The server and client applications will communicate through a fixed sized binary protocol. The server will manage a global named pipe for establishing connections, after a connection has been established it will construct a separate read and write named pipes for the client to utilise. The client will communicate to the server over the named pipes. The server can be able to read from all clients asynchronously.
- <https://github.com/zhlu4172/Prochat>