

# Jiayang Shang (Dylan)

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## EDUCATION

### University of New South Wales

Sydney, Australia

Master of information technology WAM: 81.8

Feb. 2023 – Sep. 2024

*Core Courses: Principles of Programming (DN), Data Structures and Algorithms (HD), Database Systems (HD), Artificial Intelligence (DN), Computer Networks (HD), Software Construction (HD)*

### Jiangsu University of Technology

Jiangsu, China

Bachelor of Internet of things

Sep. 2018 – Jun. 2022

*Core Courses: Digital/Analog circuits, Mobile application development, Short-distance wireless technology, Embedded software development, Microprocessor Application, etc.*

## TECHNICAL SKILLS

**Programming Languages:** Python, C/C++, C#, SQL, JavaScript, TypeScript, PHP, Shell, Cypher

**Frontend Frameworks & Styling:** React, Vue, Next.js, Material-UI, Tailwind, HTML, CSS

**Backend Frameworks:** Node.js, Express.js, Flask, FastAPI, Laravel, WordPress, Django

**APIs & Testing:** GraphQL, REST, Jest, Cypress

**Libraries & Tools:** OpenCV, Selenium, QT, WebAssembly, Jira

**Cloud & DevOps:** Git, Docker, CI/CD, Google Cloud Platform, AWS, Azure

## EXPERIENCE

### Software Engineer

March. 2025 – Present

*Aquion Pty Ltd · Internship*

*Sydney, New South Wales, Australia*

- Develop software with Jira, Docker, Laravel, Mysql, Vue.js, OpenAI API, CI/CD
- Collaborated with the team to build a centralized procurement platform integrating Sage ERP and Eway APIs

### Software Engineer

Dec. 2021 – Jun. 2022

*Youzhi Automation Technology · Internship*

*Jiangsu, China*

- Developing industrial vision software with C++, C#, OpenCV and QT
- Implementing and optimizing the vision algorithms and improving the interactivity of software
- Engaged in performance benchmarking of software systems, systematically evaluating metrics, and analyzing results

## SELECTED PROJECTS

**Kùzu-Wasm [Link]** | C++, Javascript, React, Webassembly, Apache Arrow, Cypher

Feb. 2024 – Dec. 2024

- First public Graph Database powered by WebAssembly
- Developed during the research program at the UNSW under the supervision of Dr. Zhengyi Yang
- Designed to provide fast server-less analytical processing for the graphs on the Web
- Features: Extremely fast, Highly Scalable, Serverless, Embeddable, Cypher Support

**Industrial Vision Processing Program [Link]** | C++, C#, Qt, OpenCV, PCL

Dec. 2021 – Jun. 2022

- Developed a machine vision software named AIV with C++, which was used in industrial product quality testing
- Using OpenCV to accomplish 2D/3D features including template matching, line/circle/plane finding, etc.
- Implemented UI functions including step-by-step execution, scripting, debugging, 2D/3D effect preview, etc.

**Campus Guide Program [Link]** | PHP, Python, MySQL, React

Jul. 2018 – Present

- Built a WeChat program with React which provides campus guide including encyclopedia, news, personal class schedule, and learning materials for all staff and students
- Implemented Restful API interface with Laravel framework and used Python to collect course information
- The program has been maintained since 2018, and the number of users is over 10,000

## PUBLICATIONS

**Pine Script v5 User Manual Chinese Version:** Script Manual for TradingView, published on Feb. 2022 on GitHub [Github] [Online Book]

**Kùzu-Wasm: High-performance In-browser Graph Analysis:** Under the supervision of Dr. Zhengyi Yang and published on Aug. 2024 during the research program at UNSW [Link]