

# Jonathan Adiyasa Helga 李韋前

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## Professional Summary

Progress-driven Computer Science candidate, with strong logic and interest in C/C++ programming, embedded systems, and back-end development. Demonstrated success in cross-functional team projects with practical knowledge of full-stack architecture. Seeking internship opportunity to apply technical knowledge and gain real-world experience to develop professional expertise.

## Education

### University of Tamkang

Bachelor of Science of Computer Science & Information Systems (Current **GPA 3.88**)

Tamsui, New Taipei

Graduate on: June 2026

**Relevant Coursework:** Data Structures, Algorithms, Introduction to Software, Database Systems, Operating Systems, Advanced Computer Programming (**C/C++**), Object Oriented Programming (**Java**).

## Projects

### MiniPOS - Business Point-of-Sales Desktop App (Node.js + Express, SQLite, Electron)

August 2025

- Built a full-stack system offline for a small retail shop, featuring inventory management, sales tracking, real-time stock updates, and automatic billing with transactional data integrity.
- Developed cross-platform desktop app with frontend-backend IPC communication and a well-managed process lifecycle.
- Developed multi-format barcode generation system supporting paper and sticker layouts for product label printing.
- Implemented real-time inventory management with transaction processing, automatically updating stock levels across sales, preventing overselling by validation checks.
- Designed an SQLite database with enforced foreign keys and optimized indexes, achieving a 60% reduction in query time.
- Created automated inventory monitoring with color-coded alerts, integrated into stock management interface.

### CaterFlow - Catering Management Web Application (PHP, HTML, CSS, MariaDB)

May 2024

- Multi-user web-app for catering business operations. Manages customer, vendor records, orders, and invoicing, also providing data search and wage calculation tools.
- Implemented secure user authentication with session control.
- Enabled dynamic order processing with printable invoice generation.
- Automated helper wage calculator (supports overnight shifts).
- Centralized search across customers, orders, vendors, and products.

### Simple Fire Detector and Alarm using ESP32 (C++, Blynk, Wi-Fi, Sensors) From IOT University Course

June 2024

- Built a simple **embedded IoT system** using the **ESP32** microcontroller with a flame sensor, LED indicator, and passive buzzer for fire detection, integrated with Blynk for real-time monitoring and push notifications to mobile devices.

### Word Frequency Counter

October 2023

- Developed a text analysis tool in C to count word frequencies using arrays, **binary search**, and **file I/O**.

## Skills

### Programming Language:

C/C++ . JavaScript . PHP . SQL . JAVA

### Web Development & Frameworks:

React . Three.js . Express . Git . XAMPP . MySQL . MariaDB . SQLite

### Languages:

Indonesian (**Native**) . English (**Fluent**) . Mandarin Chinese (**Basic Conversational**)

### Certification:

C Programming: Become a Pro! Think Like a Programmer! – **Udemy** . Microsoft Certified: Azure AI Fundamentals

## Work Experience

### Waiter - 中山五十六 Restaurant

February - November 2025 | New Taipei

- Served and managed up to 45 customers during peak hours as the sole front staff on shift on weekdays.
- Ensured cleanliness and hygiene throughout operating hours.
- Developed strong multitasking, time-management, decision-making, and focus skills, handling up to 10 simultaneous tasks during peak periods.