William Weng

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About

Passionate about learning and problem-solving, I thrive in collaborative environments and am excited to apply my skills in full-stack development to create innovative software solutions.

Education

UNSW 2016 - 2023
Bachelor of Science
in Computer Science

Skills

Coding

JavaScript	HTML
TypeScript	React
Python	SQL
C/C++/C#	Storybook
CSS	Perl
xsl-fo	Regex
Blazor	

Additional skills

Git
QF-Test
Excel/sheets
Electronics
Arduino
CAD Modelling
3D printing
Team leading
Laser cutting

Professional Experience

Simul Health

Software Developer Jan 2025 - current

- Design and implemented domain models for patient profile and clinical information.
  - Learned about **C#**, **ASP.NET**, **Entity Framework Core** and **Migrations**
  - Created **20+** domain models ensuring accurate representation of business domains and relational connections
- Design and implemented front-end components to create, edit and display patient information
  - Learn about **Blazor** to write **15+** UI components that handles creation, edit and deletion of domain entities.
- Studied Domain Driven Design

Smart Health Solutions

Junior Software Development Oct 2023 - Dec 2024

- Created front end components to effectively display patient information on a **React/Typescript** web application
  - Wrote component stories in **Storybook** for unit testing UI components
  - Created drag and drop functionality on table components to re-arrange elements.
  - Developed custom algorithms for presenting patient data within service records and validated through unit testing, ensuring full compliance with specification requirements.
- Built from scratch a report generating micro-service, dockerised to be deployed on **Kubernetes**.
  - Learned how to generate **XSL-FO** documents using **Java**, to be parse by **Apache-FOP** for PDF rendering.
  - Wrote system that handles text formatting, layout of grid and tables for rendering data by translating **XML** forms.
  - Wrote unit tests to follow **test driven** development ensuring system can be iterated upon without concerns.
  - Create **REST API** end points using **Spring Boot** to communicate service record data and generated reports between micro-service and monolithic application
- Investigated and patched 10+ reported bugs on both the back-end server application and front-end client side WebUI.
- Studied intermediate software concepts
  - Read about creational, structural and behavioral design patterns, e.g., factory, builder, proxy, visitor...
  - Learned about monolithic vs micro-service architectural design

Knowledge

Domain driven design

Creational, Structural and behavioral design patterns

Relational data modeling

Web Frameworks (React, Blazor)

UI component lifecycles

Test driven development

Agile development

Inversion of control

Dependency Injection

Single responsibility principles

Separation of concerns

REST API

HTTPS

Functional programming

Object-Oriented programming

Micro-service infrastructure

Monolithic infrastructure

Data structures

Algorithms

Dynamic programming

Cloud infrastructure

Smart Health Solutions

Quality Assurance Tester May 2017 - Oct 2023

- Designed and executed test strategies (manual & automated) for hospital-grade healthcare web application
  - Wrote **50+ test procedures** for user stories that ensures comprehensive testing of new features
  - Performed written test procedures and reported **150+ bugs**
  - Created **50+ QFTest** test suites to handle automated testing of Java Swing and React graphical interfaces.
- Orchestrated QA sign-off on **20+ major and minor releases**, maintaining a post-release defect rate below 10% and ensuring zero critical production outages.
- Wrote **30+** user stories, enhancements and change requests by **communicating with customers** and collaborating with development team to ensure concise delivery of specifications.

Projects

CREATE UNSW

Executive Team 2017 - 2018

- Organised hands-on workshop experiences and learning opportunities in engineering, electronics and software.
  - Participated in **mentoring** students.
  - Help manage room booking and setup for workshops.
- Led design and fabrication of a light–art installation featured at VIVID Sydney 2017.
  - Collaborated in overall design and technical aspects of the installation.
  - Wrote code for an **Arduino** for communicating with sonic sensor and LED light strips.
  - Wrote **algorithms** that creates colourful pattern including gradients and transitions between templates.
  - Manufacture and assembled wood, acrylic and electrical components.
- Successfully **market** events, projects and store, driving increased visibility and engagement to our society.

UNSW - MCIC

Maker Mentor 2017

- Maintained and managed tools in the maker space, including laser cutters, CNC machines, 3D printers, and woodworking equipment, ensuring optimal functionality for student use.
- Assisted students with their projects by providing guidance and direction, helping them navigate resources and techniques to achieve their goals.

Education

University of New South Wales

Transferred from Bachelor of Mechatronics Engineering

Graduated with Bachelor of Computer Science 2016-2023

Courses: Microprocessors and Interfacing, Engineering Design in Computing, Electrical Engineering, Networks, Database Systems, Algorithms and Programming Techniques, Advanced C++, Computer Graphics