

Lily Wu

- Software Engineer

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Personal Summary

I've always been interested in understanding how things work. A detail-oriented Full Stack Software Engineer specialising in building responsive, scalable web applications using .NET/C# and React/TypeScript. Confident in developing back-end services with ASP.NET Core, Entity Framework Core, SQL Server and RESTful Web APIs, while integrating modern front-end technologies to create seamless user experiences.

Experienced in containerising applications with Docker, deploying cloud-ready solutions through Azure, and applying object-oriented programming, SOLID principles and design patterns to build maintainable software. Adept at translating complex business requirements into practical, optimised software solutions, with growing knowledge of CI/CD, microservices architecture, Agile/Scrum practices and AI API integration.

Passionate about leveraging modern technologies, including AI APIs and prompt engineering, to enhance application features, improve workflows and deliver user-focused digital solutions.

Key Skills

- C# / .NET
- ASP.NET Core
- Entity Framework Core
- SQL Server / SQL Queries
- REST API / Web API
- Object-Oriented Programming
- Azure / Cloud Deployment
- CI / CD
- Docker
- Responsive Web Design
- Microservices Concepts
- AI API Integration
- React / TypeScript / JavaScript
- HTML / CSS / SCSS
- Tailwind CSS / Redux
- SOLID Principles / Design Patterns
- Agile / Scrum
- Prompt Engineering

Experience Highlights

Software Engineer

2025 – present

SOCOTEC, UK, Manchester

Project: Internal Field Service & Monitoring Platform - A system to manage multi-site route planning, compliance sampling data management, and real-time technician tracking.

- Developed back-end services using ASP.NET Core Web API, C#, Entity Framework Core and SQL Server, optimising spatial data queries and supporting structured management of site visits, sampling records and operational workflows.
- Built and maintained RESTful Web APIs to connect front-end interfaces with relational database models, improving data consistency and accessibility across the platform.
- Designed responsive front-end components using React, TypeScript, JavaScript, HTML and CSS/SCSS, creating clear and user-friendly interfaces and enabling field technicians to log time-stamped site diaries and chain-of-custody data seamlessly.
- Applied object-oriented programming, SOLID principles and design patterns to improve code structure, maintainability and separation of responsibilities.
- Containerised application components with Docker and supported Azure/cloud deployment, while exploring AI API integration and prompt engineering to improve workflow automation and data interpretation.

Full Stack Software Engineer

November 2022 – May 2025

Innoware, UK, Manchester

Project: Enterprise Resource Planning & Client Management Solutions - Comprehensive business logic handling, supporting internal workflows, client records, cross-departmental coordination and operational dashboards.

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- Played a key role in migrating legacy monolithic architecture to scalable, event-driven microservices. Developed full-stack features using C#/.NET, ASP.NET Core, React, TypeScript and SQL Server, supporting business logic, client data management and internal workflow processes.
- Built REST API/Web API endpoints and data access layers using Entity Framework Core, LINQ and SQL queries, enabling reliable communication between front-end and back-end services.
- Created responsive and reusable UI components using React, TypeScript, JavaScript, HTML, CSS/SCSS, with exposure to Tailwind CSS and Redux for styling and state management, increasing overall user workflow efficiency and satisfaction by 30%.
- Applied object-oriented programming, generics, SOLID principles and design patterns to improve type safety, code readability and long-term maintainability.
- Gained practical experience with Docker, CI/CD concepts, microservices architecture, cloud deployment workflows and Agile/Scrum practices to support scalable and maintainable software delivery.

Additional Experience

Project Coordinator

2020 – 2022

Yao Woo Group, Taiwan

Project: Restaurant Operations & Sustainability Data Improvement - A workflow and data improvement project to support restaurant site renovation, sustainability KPI tracking, waste management processes, supplier coordination, and performance reporting.

- Managed sustainability and operational improvement initiatives, reducing food waste by **45%** and increasing local ingredient sourcing by **38%** through workflow optimisation and supplier coordination.
- Built KPI trackers and maintained structured reports for waste, sourcing and service performance, strengthening data accuracy, auditability and evidence-based decision-making.
- Improved cross-departmental communication and SOPs, reducing service bottlenecks and increasing order fulfilment speed by **23%** while maintaining **90%+ customer satisfaction**.

Education

MSc Environmental Impact Assessment and Management, The University of Manchester, UK

Key Focus Areas: Applied Data Science | Spatial Data Modelling | Systems Analysis | Process Automation

Key Learning Outcomes: Transitioned into technical development by learning core programming fundamentals (C#, SQL) to process, clean, and analyse complex ecological datasets. Applied logical reasoning and scripting to automate data workflows and map spatial constraints using GIS systems. Gained robust experience in translating strict regulatory requirements into precise, audit-ready relational data models—skills that directly formed the foundation for my transition into backend architecture and database design.

BBA Business Administration, Soochow University, Taiwan | GPA: 3.9 out of 4

Key Focus Areas: Strategic Technology Integration | Data Analytics | Operations Management | Enterprise Architecture

Key Learning Outcomes: Developed a strong foundation in understanding complex enterprise requirements, business logic, and strategic technology adoption. Initiated my software engineering journey by undertaking elective coursework in web development (HTML/CSS/JavaScript) and applied data analytics. Cultivated cross-functional planning, requirement gathering, and communication skills that are essential for bridging the gap between business stakeholders and agile software engineering teams.