William To

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Professional Summary

Senior Software Engineer specialising in distributed systems, cloud-native backend development, and high-performance data pipelines. 4+ years delivering scalable APIs, modernising legacy platforms, and architecting secure microservices across Azure and AWS. Strong focus on Clean Architecture, automation, and measurable engineering impact.

Skills

Languages & Frameworks: C#, .NET Core, ASP.NET Core, Python, TypeScript, SQL, React, Node.js, GraphQL, EF Core, Autofac, FluentValidation, shadcn/ui, Zustand

Cloud & DevOps: Azure, AWS, Azure Functions, Docker, GitHub Actions, Azure DevOps, Terraform, Bicep, Linux CI/CD pipelines, Containerised Microservices, IIS

Data Engineering & Integrations: SQL Server, PostgreSQL, REST APIs, Event-Driven Systems, Data Pipelines, Power BI, Excel Automation, OAuth2, High-Performance Query Optimisation

Architecture & Practices: Clean Architecture, Microservices, Domain-Driven Design (DDD), CQRS, TDD, Serverless, Event-Driven Design, Scalable API Design, DevSecOps, RBAC

Professional Skills: Stakeholder Engagement, Requirements Analysis, Agile (Scrum/Kanban), Backlog Refinement, Technical Documentation, Jira, Confluence

Work Experience

PicNet, Sydney Jan 2024 – July 2025

Senior Software Engineer

- **Cloud & Platform Modernisation** — Migrated legacy workloads to Azure using Terraform and serverless Functions, reducing deployment and onboarding effort by **70%**. Established organisation-wide secret-governance with Azure Key Vault and AWS Secrets Manager.
- **Data Engineering & Performance** — Optimised NSW Health's multi-terabyte SQL workloads by redesigning indexes and execution plans, reducing report processing times from **hours → minutes**. Automated Excel-based operational workflows into reliable SQL pipelines.
- **Integration Engineering** — Delivered real-time synchronisation pipelines for Lightspeed, Xero, and Hello Club, ensuring consistent billing, sales, and activity data across systems.
- **Distributed Systems & Product Engineering** — Architected and deployed *Lymbase* on AWS using containerised Python–Flask microservices and a React frontend with secure encrypted authentication. Implemented analytics workflows enabling automated clinical-measurement detection, reducing clinician assessment time by **30%**.
- **Quality & DevOps** — Built extensive unit/integration test suites and Linux-based CI/CD pipelines generating verified Docker images per merge. Integrated four NSW Health patient-file formats into mLoad, reducing file errors by **90%** and halving turnaround.

PicNet, Sydney Feb 2022 – Jan 2024

Junior Software Engineer

- **System Rebuilds & Performance** — Rebuilt NSW Health's patient-data uploader with row-level validation and Azure Blob SFTP, improving throughput **4×** and reducing ingestion failures to near-zero. Replaced legacy AD-group auth with lightweight RBAC, cutting login latency by **70%** for 600+ users.
- **Cloud Automation** — Built metadata-driven Azure Functions automating SharePoint → SQL ingestion for Guide Dogs Australia, reducing reporting cycles by **80%**. Migrated PicNet's website to an Astro + AWS Amplify stack, improving Lighthouse scores from **60 → 97**.
- **Product/UI Engineering** — Delivered a Power BI in-context commenting visual with identity auto-tagging, boosting analytical engagement by **60%**.

OpenHomeLoan Aug 2020 – Apr 2021

Intern Software Developer

- Built an ASP.NET + SalesTrekker API automation engine that tripled loan-approval speed and enabled scalable personalised lending recommendations.
- Developed responsive marketing pages, increasing conversion rates by **25%**.

Education

University of Technology Sydney (UTS)

Bachelor of Engineering (Honours) Diploma in Professional Engineering Practice (ICT/Software)   *GPA: 6.2/7*

Project Work

FitNote – Full-Stack Fitness Tracking Platform ↗
Tech: .NET 9, ASP.NET Core, PostgreSQL, GraphQL, Next.js 15, React 19, Tailwind, Apollo Client, Zustand, PWA, Cursor, Claude Code
- Built a production-grade fitness platform with offline-first PWA capability, real-time workout tracking, and a searchable 400+ exercise library.
- Designed a scalable GraphQL API using UUID identifiers, schema-driven validation, CQRS-style resolvers, and field-level JWT authorisation for secure and predictable execution.
- Architected a Clean Architecture backend using EF Core, Autofac, and FluentValidation, improving testability, modularity, and separation of concerns.
- Engineered a modern React 19 frontend with shadcn/ui, Apollo cache normalisation, dynamic code-splitting, and Zustand for predictable offline state management.
- Implemented responsive UI/UX patterns, theme management, and accessibility improvements using Tailwind and component composition best practices.
- Utilised **Cursor** and **Claude Code** to accelerate refactoring, documentation, test generation, and architectural exploration.

Test Platform – Multi-Tenant Assessment System (⌽)
Tech: .NET 8, React, Vite, Tailwind CSS, SQL Server, JWT, RBAC, CI/CD
- Developed a multi-tenant assessment platform supporting per-tenant branding, timed assessments, question randomisation, and secure role-based access with JWT + RBAC.
- Designed a scalable .NET 8 backend with domain separation, optimised SQL Server schema design, and predictable multi-tenant query performance.
- Engineered a performant React UI with Vite, component composition, and responsive layouts for consistent UX across branded tenants.
- Built an automated CI/CD pipeline enabling reproducible builds, migration safety checks, automated tests, and seamless production deployments.

References

Available upon request.