

Senior full-stack engineer with 11+ years of delivering enterprise .NET and JVM systems. Deep expertise in microservices, event-driven architecture, production AI integration, AI-assisted delivery systems, and developer tooling. Strong advocate for TDD, pair programming, and collaborative engineering practices that improve code quality and team velocity.

B.Sc. Mathematics and Computer Science — University of South Africa (UNISA)

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[One-page resume](#) available for a concise PDF-friendly version.

[Selected public projects](#) are available as a short portfolio reference for technical reviewers.

Skills

Back-end Development

Area	Details
C# / .NET	Expert knowledge, .NET Framework 3.5 through .NET Core 9
JVM Stack	Spring Boot, Kotlin, Java
Architecture	Microservices, event-driven architecture, DI, CQRS, DDD, Clean Architecture
Azure	App Services, Functions, Service Bus, Azure SQL, Blob Storage, App Insights, Entra
AWS	Bedrock, ECS, SQS, S3
Testing	NUnit, xUnit, MSTest 2, JUnit, Selenium, Storybook, TDD, mutation and integration testing
API Development	ASP.NET WebAPI, FastEndpoints, GraphQL, Spring Boot
Messaging	MassTransit with Azure Service Bus and event streaming
Data Access	Entity Framework Core, Dapper, raw SQL
Databases	SQL Server, PostgreSQL, MySQL
Security	ASP.NET Identity, OAuth2, JWT, Microsoft.Identity, Azure AD / Entra ID
Libraries	MediatR, Serilog, Polly, AutoMapper, Refit, Quartz.NET, OpenAPI
DevOps	CI/CD with Azure DevOps, TeamCity, Octopus Deploy, GitHub Pages, PowerShell, Docker
Observability	OpenTelemetry, Seq, OpenSearch, Application Insights SDK, Serilog Sinks
Static Sites	Astro, content collections, RSS, metadata validation, image optimisation
Developer Tooling	Roslyn semantic analysis/refactoring, CLI design, backlog automation, scripted workflows

AI/ML Integration

Area	Details
Production AI Systems	OpenAI Platform, Claude API, LangChain4j, AWS Bedrock, prompt engineering
Applications	Automation, multimodal analysis, guardrails, agentic coding workflows, technical content pipelines
Platforms	AWS Bedrock, OpenAI, local LLMs, Hugging Face Transformers, llama.cpp-compatible runtimes
Developer Tooling	Claude Code skills, MCP integration, Codex workflows, PRD backlog automation, prompt and workflow optimisation
Media Generation	ComfyUI, Flux-based image generation, local AI asset pipelines

Front-end Development

Area	Details
Frameworks	TypeScript/JavaScript with React, Angular, Astro, Vite, Vitest, and ASP.NET MVC
UI Design	CSS, Tailwind CSS, Material UI

General

Area	Details
Version Control	Git, GitHub, Bitbucket, Azure Repos
Agile Tools	Jira, Confluence, Azure DevOps Boards, Teams, Slack
Practices	TDD, pair/mob programming, code review, mentorship
Operating Systems	macOS, Windows, Linux, iOS, Android

Recent Projects and Achievements

- Built an AI-assisted delivery system around Claude Code/Codex: reusable skills, project memory, PRD backlog management, TDD execution, mutation testing, Jira/Bitbucket workflow automation, and post-session reflection.
- Built a Roslyn-based C# refactoring CLI for semantic solution-wide rename, move, reference lookup, dependency analysis, duplicate detection, and safe refactoring across legacy ProjectX solutions.
- Drove technical analysis for a pre-launch tour booking platform, including Hero API source-of-truth decisions, PII minimisation, Stripe/Hero payment flow diagnosis, EF migration constraints, and Jira/PR delivery workflow.
- Built an AI-assisted publishing workflow for this Astro blog that drafts articles, generates local illustrations, opens browser previews, publishes to GitHub Pages, and prepares LinkedIn posts from a single command.
- Published technical write-ups on local LLM inference, Claude Code/MCP context optimisation, AI workflow design, and financial rounding correctness.
- Created a Windows setup guide and installer script for running a Bonsai 8B 1-bit LLM locally with CUDA and an OpenAI-compatible API.
- Improved this site with AVIF/WebP image generation, deferred font loading, Shiki syntax highlighting, RSS support, and Playwright coverage for meta descriptions.

Employment

Independent / Contract — AI-assisted software delivery and platform engineering

Senior Software Engineer / AI Workflow Engineer | March 2026 – Present

- Built and maintained a personal AI engineering system using Claude Code and Codex skills, project memory, reusable agents, and scripted workflows to keep delivery scoped, test-led, and auditable.
- Created PRD backlog automation for story intake, acceptance criteria expansion, execution tracking, completion, parking, and visualisation.
- Developed a Roslyn-powered C# refactoring CLI to support semantic rename, move, reference lookup, structural analysis, and safe cross-project refactoring in complex .NET solutions.
- Led technical delivery and risk reduction for a pre-launch tour booking platform, including Hero API integration strategy, PII minimisation, Stripe payment reconciliation, Azure image storage decisions, and Jira/Bitbucket workflow.
- Formalised TDD, mutation testing, code review, and refactoring workflows into reusable skills and agents for consistent AI-assisted engineering.

Reapit — reapit.com

Senior AI Engineer | September 2025 – February 2026

- Workshopped, built, and deployed an AI-driven property inspection system using AWS Bedrock, generating structured assessment reports constrained by business rules.
- Forked the LangChain4j framework to add Bedrock guardrail support when unavailable upstream. Modular architecture enabled a seamless swap to the official implementation within one day when released.
- Optimised LLM costs through strategic model selection balancing accuracy, features, performance, and token usage.
- Advised cross-functional teams on practical AI use cases.
- Self-directed adoption of the Kotlin/Spring Boot/AWS ecosystem, delivering production features while supporting the team with JVM implementation patterns.

RACT (Royal Automobile Club of Tasmania) — ract.com.au

Senior Software Engineer – Back-end | June 2024 – July 2025

- Applied Clean Architecture and DDD to enhance testability, scalability, and code clarity.
- Involved in pilot program to develop AI coding rulesets and best practices.
- Migrated and modernised core components from .NET Framework 4.7.2 to .NET 9.
- Built resilient microservices using MassTransit, WebAPI, GraphQL, and SQL Server.
- Collaborated with cross-functional teams to deliver scalable, well-tested features aligned with business requirements.

National Grower Register — ngr.com.au

Senior Full-Stack Engineer | November 2023 – May 2024

- Co-developed a modular online form solution (Flexidocs) using Clean Architecture and DDD, replacing an outdated system.
- Designed modern functional React 18 components with TypeScript and Tailwind CSS.
- Provided guidance on C# programming, OOP, AI tools, and testing best practices.
- Researched and selected sustainable technologies to support long-term goals.
- Improved legacy code with unit test coverage, enabling safe refactoring.
- Contributed to technical documentation and Agile processes.
- Mentored junior staff.

CloudMonitor — cloudmonitor.ai

Lead Azure / Back-end Engineer | June 2023 – November 2023

- Conceptualised, developed, and maintained features running on a serverless platform.
- Promoted TDD, SOLID principles, Clean Architecture, and peer programming.
- Introduced Agile processes, leading morning standups and mentoring junior developers.
- Azure DevOps pipeline maintenance and troubleshooting.
- Introduced Entity Framework, OpenAPI, xUnit, and JetBrains Rider.
- Presented company-wide tech talks and engaged with external stakeholders.

VALD — vald.com

Software Engineer – Back-end | January 2023 – May 2023

- Maintained, refactored, and contributed to various legacy REST APIs and microservices.
- Contributed to the integration testing framework.
- Promoted TDD and peer programming.
- Chaired and contributed to various Agile ceremonies.

Situ Systems — situsystems.com

Senior Software Engineer – Full-Stack | November 2021 – October 2022

- Authored numerous front-end and back-end features.
- Substantially increased test coverage and improved testing methodologies.
- Tuned SQL queries, dramatically improving performance in critical reports.
- Used Pulumi to automate deployment of infrastructure.
- Implemented CI workflows in Azure DevOps.
- Contributed to internal development tools.

HUB24 Limited — hub24.com.au

Data and Full-Stack Engineer | December 2019 – November 2021

- Authored a sophisticated and successful system for cleaning, transforming, and validating fund transfers between superannuation funds.
- Maintained strong working relationships with DBAs, architects, BAs, clients (e.g. Bank of New York), and senior management.
- Provided emergency on-call support across the organisation and managed client infrastructure, triaging and fixing or escalating issues to meet strict SLAs.
- Updated legacy web applications to deploy using Azure Pipelines.
- Championed TDD and automated integration testing.
- Authored, maintained, and supported numerous APIs and ETL projects.

Chandler Personalised Communications — chandler.com.au

Data and Full-Stack Engineer | March 2016 – December 2019

- Worked within an ISO 27001 certified organisation meeting strict security standards.
- Built and maintained web applications servicing government, public utility, and financial sectors.
- Web design using ASP.NET, Bootstrap, CSS, jQuery, and JavaScript.
- Database design in Azure SQL Server.
- Authored SSIS ETL packages to cleanse and process superannuation member data for web, print, and email campaigns.
- Liaised with technical and non-technical stakeholders to develop bespoke solutions.

WorldSmart POS Solutions — worldsmart.com.au

Software Engineer, QA and Support | February 2011 – February 2016

- Developed and maintained enterprise software for retail groups.
- Integrated financial, CRM, and stock modules with MYOB.
- Provided QA via automated scripting and manual testing.
- Authored technical and end-user documentation and provided internal training.
- Maintained internal support utilities and automated scripts.
- Installed and supported Point of Sale hardware and software.

References

Available on request.

“Dan is an absolute pleasure to work with and I would highly recommend him for any full-stack web development position. We worked together for just under a year and during that time Dan was always friendly, professional and went above and beyond when implementing code and designing systems. He has a keen eye for where things can be improved and is always looking to find the optimal solution to any problem he faces. He writes clean, well-structured code that is easy to maintain. He takes advice and constructive criticism well and brings a positive attitude to every meeting. Dan would be an invaluable addition to any software team.”

— **Alistair Doulin**, CTO, Situ Systems Pty Ltd