

MELANIE LUCK

Independent Application Architect & Technical Consultant

Architecture Reviews | Legacy Modernisation | AI-Assisted Delivery

melanie@melanieluck.com | [linkedin.com/in/melaniemears](https://www.linkedin.com/in/melaniemears)

Cape Town, South Africa | Remote engagements, open to international clients

Professional Profile

- Application architect and technical consultant with 20 years of experience across investment banking in London, legal technology, property management software and SaaS.
- Helps teams get more out of existing systems: architecture and code-quality reviews, modernisation of legacy applications, and practical, cost-aware AI-assisted delivery processes.
- Hands-on throughout, from diagnosing performance problems in production code to designing high-volume messaging and integration solutions, with clear communication to both technical and business stakeholders.

Core Expertise

- | | |
|--|--|
| • Architecture and Code-Quality Reviews | • Performance Optimisation and Scalability |
| • Legacy Application Modernisation | • Messaging and Integration |
| • AI-Assisted Delivery Set-up | • Azure DevOps and CI/CD |
| • Application Architecture and System Design | • Team Enablement and Mentoring |

Professional Experience

CareHeart | Founder & Product Architect (independent venture) | Jun 2026 – Present | careheart.co.za

- Conceived and built CareHeart, a caregiver collaboration and care-management platform inspired by first-hand experience coordinating care for a family member with advanced dementia; validated requirements through interviews and feedback sessions with caregivers, patients and families.
- Designed and delivered a web application, Progressive Web App and Android app in about four months, architected on Next.js, PostgreSQL, Supabase and Vercel for scalability, maintainability and low running cost.
- Implemented care plans, task management, reporting, notifications, audit trails, multi-user collaboration, MFA, PIN authentication and POPIA-aligned security controls.
- Established an AI-first delivery process using Claude, Cursor and GitHub Copilot across requirements analysis, PRD creation, architecture, implementation, documentation and automated testing.
- Released the Android app through Google Play closed testing; in active use by a care team of five carers, with rollout to further test families planned.

MRI Software | Development Manager / Tech Lead | Mar 2022 – May 2026

- Led a distributed team of 10 developers and QA engineers across South Africa and India on one of South Africa's leading property management platforms, serving 2,000+ customer organisations.
- Accountable for architecture, technical delivery, stakeholder engagement, recruitment, onboarding, code reviews and engineering standards; ran monthly coaching sessions, with one intern hired permanently and one developer promoted to senior.
- Conceived an AI-assisted modernisation framework that reduced migration of legacy VB.NET functionality to C#, Angular and Entity Framework from weeks to days per module; modernised five production modules and established reusable standards, documentation and processes.

- Used AI to build a source-code analysis tool that derives requirements directly from legacy applications, removing AI token costs from specification work.
- Redesigned the cashbook reconciliation module with pattern-based matching, increasing automatic matches by 80% and reducing manual effort, working closely with UX and support teams.
- Redesigned a reusable, API-driven email platform capable of sending 100,000+ emails an hour, improving maintainability and extensibility.
- Rebuilt Azure DevOps CI/CD as YAML pipelines per component and branch with multi-environment deployment, speeding up releases and de-duplicating configuration.
- Led the migration of 20+ Crystal Reports to SQL Server Reporting Services (SSRS), standardising reporting and improving long-term supportability.

LexisNexis | Application Architect / Senior Software Engineer | May 2015 – Mar 2022

- Architect for a product team of around seven developers building legal technology used by 2,000+ organisations; set engineering standards, ran architecture reviews and facilitated a monthly developer forum.
- Designed synchronisation and message-processing solutions for high-volume conveyancing workflows, handling around 1 million messages a day.
- Designed in-app chat between users of the LexisConvey application, and led the migration from AngularJS to Angular.
- Analysed performance and code-quality problems in the Lexis Sign electronic-signing platform, recommended fixes and implemented many of them.

Credit Suisse | Senior Analyst Programmer | London | Nov 2009 – Dec 2014

- Designed, built and supported trading applications for around 30 traders and sales traders across equities, futures and bonds desks covering European markets.
- Delivered trading workflow, indication-of-interest and crossing-opportunity solutions; managed releases, prioritisation, user training and production support.

Jefferies International | Microsoft Analyst Programmer | London | May 2007 – Nov 2009

- Delivered front-, middle- and back-office systems, FSA transaction reporting, Bloomberg trade processing, reconciliation and data warehouse solutions.

KPMG | Junior Analyst | Jan 2006 – Jan 2007

- Performed IT audits, governance and risk reviews, and process-improvement engagements based on COBIT.

Technology Stack

Backend: C#, .NET, ASP.NET, Entity Framework, WPF, WinForms

Frontend: Angular, TypeScript, Next.js, HTML, CSS

Data & reporting: SQL Server, PostgreSQL, Sybase, SSRS

Cloud & DevOps: Azure, Azure DevOps (YAML pipelines), Supabase, Vercel, Git, TFS, SVN

Messaging & monitoring: RabbitMQ, Tibco EMS, Grafana, Application Insights

Testing & AI tooling: Playwright, Postman, JMeter, Bruno; Claude, Cursor, GitHub Copilot, ChatGPT

Education and Certifications

- BSc (Hons) Computer Science, Cum Laude – University of Johannesburg
- BSc Information Technology, Cum Laude – Rand Afrikaans University
- Microsoft Certified: Azure Administrator Associate (2024) and Azure AI Fundamentals (2022)
- Microsoft exams 70-480 (HTML5, JavaScript & CSS3) and 70-486 (ASP.NET MVC Web Applications)