

PROFESSIONAL PROFILE

Transformation leader with 17+ years across banking, health, utilities and government. Author of Blackwall, a forthcoming book on AI security architecture, with companion open-source libraries in JavaScript and Python. Built and led Australia Post's first enterprise agentic AI program - taking AI from concept to production at scale in a complex, regulated environment. Previously scaled EY New Zealand's emerging technology practice to a team of 30, and architected digital ID (KauriID), one of New Zealand's earliest blockchain-based digital identity platforms. I turn ambiguous executive problems into governed, measurable AI outcomes.

TECH EXPERTISE

AI & ML	Python, R, NLP, CNN, Groq, Azure OpenAI studio, Gemini, MCP, Langchain, Vector Databases
Enterprise/Solution Architecture	TOGAF, Microservices Architecture, Event-Driven Architecture, Integration Patterns, Data Modelling, Cloud-Native Architecture, Digital Twin Design
Cloud & DevOps	GCP, Azure, AWS, Docker, Kubernetes, CI/CD, MLOps
Data Engineering & Analytics	Data Pipelines (Azure Data Factory, Azure Synapse, Databricks, Apache Kafka), Data Warehousing (Snowflake, Redshift), SQL, NoSQL, Power BI, Tableau, Big Data (Spark, Hadoop)
API & Integration	SOA, REST APIs, Dell Boomi, Mulesoft, MapBox, ArcGIS, Google APIs, social media APIs
Full Stack Development	PHP, Node.js, ReactJS, VueJS, AngularJS, HTML5, CSS3, Bootstrap, LESS/SCSS/SASS, JavaScript
Blockchain & Cryptography	Solidity, CryptoJS, TweetNaCl, Truffle, web3.js, Ethereum MIST
Databases	MySQL, MongoDB, PostgreSQL
Network & Server Management	Linux, Microsoft, Apache, NGINX
Project Management	Agile (Scrum, Kanban), JIRA, Trello
Data & AI Governance	Responsible AI frameworks, AI risk and policy, NZ Privacy Act 2020 (incl. IPP 3A), Australia Privacy Act, data stewardship, Māori data sovereignty principles

HIGHLIGHTS OF RELEVANT EXPERIENCE

1.) AP Labs Lead - Australia Post, Melbourne, AU from November 2025 to Present (Perm, FT)

Role: Head of AI Labs and Innovation. Led enterprise AI strategy, architecture and delivery across Australia Post, taking agentic AI from concept to production across workforce, retail and operations.

Responsibilities

- Built and deployed Australia Post's first production agentic AI systems in under 12 months, covering HR onboarding and offboarding (ServiceNow and SAP), enterprise search, fleet anomaly detection and retail workflow.
- Established Australia Post's first enterprise AI governance framework and responsible AI principles, enabling safe AI use with sensitive HR and operational data and keeping every initiative audit-ready.
- Set AI usage policy from evidence. Ran a 30-day watch-only trial in one business unit, reported to the risk committee how often sensitive data appeared, where it came from and how many alerts were false alarms, then blocked only the risks the data showed and stated the remaining gaps.
- Secured executive sponsorship and budget for the Horizon 3 AI portfolio, and took the Agentic Commerce initiative from concept to approved programme in one quarter.
- Set the AI strategy, operating model and roadmap, choosing priority use cases and delivery order across HR, Operations, Technology and Customer.
- Wrote the business cases, ROI measures and KPIs for each initiative, and reported progress, risk and investment outcomes to executives and the board.
- Ran a hub-and-spoke delivery model that brought business units at different maturity levels to a consistent standard of AI adoption.
- Managed the Google partnership for the Gemini Enterprise rollout and co-designed enterprise AI solutions with Google.
- Acted as architecture authority across cloud, data, APIs and workflow platforms (GCP, Gemini, ServiceNow, SAP, SharePoint), and owned resourcing and budget for the portfolio.
- Built AI capability across the organisation through discovery workshops, demos and mentoring, moving teams from experimentation to everyday use.

2.) Senior IT/OT Solution Designer – WEL Networks, Hamilton, NZ from Jan 2025 to Nov 2025 (Contract)

Role: Designed and implemented real time data and automation platforms that process telemetry, run assessment logic and trigger intelligent machine decisions. The work involved streaming architecture, backend services, cloud data pipelines and operational visibility.

Responsibilities:

- Designed and supported OT data architecture across PI, Kafka/Solace event streams, schema registry enforcement, object storage and Snowflake.
- Built and documented the next-gen network data flow architecture covering historian, streaming, external tables, Trino SQL, Snowflake and Power BI integration.
- Developed NIP APIs, event processors and hosting-capacity calculation engine to automate DG assessments and remove reliance on manual spreadsheets.
- Implemented Snowflake pipelines and object store landing zones for scalable analytics workloads (smart meter, DG applications, GIS integration).
- Designed and deployed DG Application Async API subscriber to process Solace DG events and update downstream solar/ESRI systems reliably.
- Delivered Raglan BESS proof-of-concept including DER Gateway -> Kalkitech Utility Server -> NSight integration with secure MQTT/2030.5 + Kafka -> PI Vision visualisation.
- Produced architecture diagrams, integration flows, PoC material, and operational playbooks for NIP platform evolution and DSO-aligned OT roadmap.
- Supported engineering, field ops and IT teams ensuring data reliability, resilience and safe uplift of NSight + analytics stack.

3.) Solution Architect and Programme Manager (Digital Solutions Lead) – Jemena, Victoria, AU from July 2024 to December 2024 (Contract)

Role: *Led architecture, design and delivery of Jemena's future networks data and digital platform.*

Responsibilities:

- Delivered the Centralised Data Hub, a real-time analytics platform on Databricks, DBT, AWS and Kafka that brings together SCADA, GIS, SAP HANA, ADMS and IoT data, aligned to ISO and TOGAF standards.
- Designed the data mesh operating model and lakehouse architecture (Delta Lake, Unity Catalog, AWS IAM) for real-time and batch analytics.
- Put machine learning into production with Databricks MLflow, Kafka and TimescaleDB for failure prediction, fault detection and outage response.
- Introduced AI-driven phase balancing, reducing transformer stress and improving network reliability for customers.
- Designed the distributed energy resource management system (DERMS) and a network virtual power plant for demand response, load balancing and network stability, integrating Zephen Energy Workbench, SCADA and GIS.
- Built automated monitoring and data quality controls (CloudWatch, ServiceNow, Unity Catalog), and shaped the data strategy so AI work sits on trusted, governed data.

4.) Systems and Digital Innovation Lead – Austin Health, Victoria, AU from April 2023 to June 2024 (Contract)

Role: Led IT systems, cloud infrastructure and digital innovation for the North Eastern Public Health Unit, managing delivery teams and external vendors across multiple concurrent programmes.

Responsibilities:

- Designed and enforced IT governance models compliant with ISO 27001, applying privacy-by-design principles across health data systems and ensuring interoperability via HL7 and FHIR standards.
- Developed architecture and innovation strategy, IT budgeting, created roadmap, resource allocation, overseeing the design, development, and implementation of tech solutions.
- Led Technical design authority, Integration, and digital innovation projects.
- Managed programme budgets, resource allocation and vendor spend.
- Defined and guided strategic technology transformation and change programs.
- Managed stakeholders internally and externally.

5.) Technology Innovation Lead (Senior Manager III - Digital & Emerging Technologies) – EY, Auckland, NZ from July 2019 to March 2023 (Perm, FT)

Role: Led emerging technology strategy and consulting delivery across EY New Zealand, partnering with clients across financial services, utilities and government to design, validate and deploy technology solutions spanning AI, blockchain, IoT and cloud.

Responsibilities:

- Built and scaled EY New Zealand's emerging technology practice, growing the delivery team to 30 and expanding client engagements across financial services, utilities and government.
- Developed and managed innovation & emerging tech consulting, delivery, vision, and roadmap
- Architected proof-of-concepts in MS Azure cloud and Emerging Technologies like Blockchain, Artificial Intelligence/Machine Learning, IoT, Edge etc.

- Conducted emerging technology landscape assessments, building technology radar to identify and prioritise strategic opportunities.
- Drove emerging tech engagement in New Zealand with a focus on key strategic client alliances
- Led RFP/RFI/RFQ, change management and solution development for new business opportunities
- Owned & led the business development lifecycle: client engagement, opportunity shaping, solution development
- Fostered a culture of innovation across client engagements, building structured innovation pipelines from ideation through to validated delivery.
- Translated complex AI and emerging technology capability into tangible customer and business outcomes across financial services, Retail, utilities and government clients.
- Owned delivery budgets across multiple concurrent client engagements, ensuring optimal resource allocation and cost-efficiency in project execution.

Projects:

Technology Projects for a Major Co-op Dairy Company in NZ

Role: Architect & Engineer (Secondment)

Technologies: Azure DevSecOps, React, NodeJS, Python, MLOps, IoT, AI/ML, Power BI, NoSQL

- **Trade Documentation Centre Migration & Automation:** Migrated and automated Trade Documentation Centre from AWS to Azure, utilising Azure Cognitive Services (Form Recogniser), Logic Apps, Azure Blob Storage, CosmosDB, Function Apps, React, and Python, while integrating blockchain technology for secure document storage.
- **HR Functional Apps:** Developed HR applications focusing on automation and efficient data handling with React and NodeJS on Azure.
- **Marketing Technology (MarTech):** Constructed a segmentation engine using Python, enhanced with Azure MLOps. Orchestrated marketing campaigns and automated sales processes using Azure services like Logic Apps, Event Grid, and Function Apps.
- **Carbon Footprint Tracking:** Designed an ESG data/app architecture integrating IoT and AI/ML on Azure to track carbon emissions across the supply chain. Automated reporting and optimised sustainability initiatives using real-time analytics and Power BI dashboards.

Blockchain/Machine Learning Projects for Public & Government Sectors

Role: Technology Lead/Engineer

Technologies: Python, IPFS (InterPlanetary File System)

Details: Led initiatives at the intersection of blockchain and machine learning, creating full-stack solutions that leveraged Python and decentralized file storage technologies to enhance governmental operational efficiency.

Water Management Document Approval System

Role: Technical Manager/Architect

Technologies: React, Node.js, Azure Blob Storage, Azure Functions, Azure CosmosDB

Details: Developed a secure, cloud-based document approval system for Auckland Council, enabling efficient transfer of water management documents to Watercare. Leveraged Azure Blob Storage for document handling, ensuring compliance with government security protocols while maintaining scalability and auditability.

Cloud Migration for a Retail Giant in NZ

Role: Architect/Engineer

Technologies: Azure Virtual Servers, DevSecOps, CI/CD

Details: Directed the cloud migration strategy for critical data applications, focusing on architecture redesign and rebuilding using Azure cloud services and modern DevSecOps practices.

Computer Vision Projects for a Major Bank in AU/NZ

Role: Architect/Engineer

Technologies: IBM Watson, NodeJS, Dell Boomi

Details: Pioneered computer vision initiatives, implementing custom CV algorithms with IBM Watson and integrating them through NodeJS and Dell Boomi to enhance banking operations.

6.) Head/Lead Architect - Innovation & Emerging Tech – ASB Bank Ltd, Auckland, NZ from November 2018 to June 2019 (Perm, FT)

Role: Led innovation and emerging technology strategy at ASB Bank, partnering with internal business units and external ventures to identify, prototype and deploy emerging technology solutions.

Responsibilities:

- Developed and updated enterprise technology strategy and roadmap for emerging tech.
- Made critical technical architecture decisions during the early stages of a project.
- Engaged senior leadership to establish successful working relationships, socialise ideas/programmes/projects, solicit feedback, and gain support of strategic initiatives.
- Represented ASB as a speaker at universities and numerous business events (panels, conferences, etc.) and developed external relationships, enhanced industry knowledge, monitored trends, and built the organisation's brand as a thought leader.
- Guided strategic Venture Fund Investments (ASB Edge Program) to target technology opportunities.
- Established an innovation guild model, convening cross-functional consortiums to share emerging technology insights, surface opportunities and align delivery across business units.
- Managed resources and people process across Performance Management, Career Development, Succession Planning and Staffing.

Projects:

- **AI/ML-Driven Compliance Tools:** Prototyped innovative regulatory compliance tools using AI and machine learning to enhance fraud detection and predictive analytics. These solutions were tailored for financial institutions, leveraging advanced data processing techniques to meet stringent regulatory standards effectively.
- **Supervisory Applications:** Developed blockchain-based prototypes for secure, transparent data handling in regulatory environments. These applications ensured data immutability, improved audit trails, and streamlined compliance processes, aligning with SupTech objectives for enhanced oversight and operational efficiency.
- Architect/Developer for Blockchain based Digital Identity Application KauriID - ` Now - <https://digitalidentity.nz>
 - Applied data sovereignty principles, including Māori data sovereignty, in the design of KauriID, a decentralised digital identity prototype developed with 15+ New Zealand organisations - ensuring individuals and communities retained control over how their identity data was held and shared.- <https://www.slideshare.net/slideshow/kauri-id-a-selfsovereign-blockchainbased-identity-system/106218672>

Earlier Career - Senior Software Engineer, ASB Bank (2018) · Full Stack & Mobile Developer, BNZ / Aviat Networks / Thundermaps / KAMAR, NZ (2016–2018) · Projects Consultant, Ministry of Health, Kuwait (2015–2016) · Innovation Software Engineer, Leading Bank, Singapore (2010–2015) · Junior Developer, Euro RSCG, UK (2009)

EDUCATION

- **Postgraduate (Information Technology)** | University of St Andrews, Scotland, UK

- **Graduate (Computer Science) | Bharathiar University, Coimbatore, South India**

PUBLICATIONS

- **Data Fabric Architecture for Public Sector Infrastructure in ANZ** - SSRN, May 2025 - <https://ssrn.com/abstract=5210350>
- **AI-driven Forecasting for Climate-Resilient Urban Infrastructure** - SSRN, May 2025 - <https://ssrn.com/abstract=5207614>
- **Improving Data Quality at Scale in Large-Scale Data Pipelines with Real-Time Monitoring and Anomaly Detection** - SSRN, February 2025 - <https://ssrn.com/abstract=5051547>
- **Data in Virtual Reality and Intelligent Hardware: Emerging Paradigms and Applications** - SSRN, February 2025 - <https://ssrn.com/abstract=5051592>
- **Privacy for Decentralised Applications: A Lightweight Encryption Approach** - SSRN, January 2025 - <https://ssrn.com/abstract=5048526>

Author page: https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=7246331

BLACKWALL: AI SECURITY

BLACKWALL: AI SECURITY ARCHITECTURE

Book (forthcoming): a technical guide to designing AI systems that stay safe when people try to misuse them.

Open-source libraries (JavaScript and Python): security controls that sit between an organisation's apps and AI models. They stop attempts to trick the AI (prompt injection), hide personal data before it reaches the model, check answers for leaks, and control which actions AI agents are allowed to take. Every decision is logged for audit. A watch-only mode lets teams measure risk before switching on blocking. Works with OpenAI, Anthropic, Gemini and OpenRouter. Licensed Apache 2.0.

JavaScript (npm): <https://github.com/vpdeva/blackwall-llm-shield-js>

Python (PyPI): <https://github.com/vpdeva/blackwall-llm-shield-python>

COMMUNITY WORK

Yarra Tech Clinic (founder, pro bono): free technology guidance for community organisations in Aotearoa, with a welcome for Māori and Pasifika organisations, including marae and hapū committees.

PODCASTS

Agentic AI Security and Media Empires, on Spotify, YouTube, Apple Podcasts and Amazon Music.



<https://vish.au/#listen>

ACCREDITATIONS

Databricks Certified Azure Platform Architect

Databricks Certified AWS Platform Architect



REFEREES

Details available on request

PERSONAL INFORMATION

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