

AI & DATA QUALITY ASSURANCE

CAPABILITY STATEMENT

ASSURING DIGITAL
SUCCESS SINCE 1997



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As an Australian software quality engineering consultancy, KJR believes in harnessing technology for meaningful impact. With over 27 years in the tech industry, we are committed to delivering world-class professional services at a human scale. Distinguished by our dedication to de-risking the technology landscape our customers navigate, we apply our industry-leading expertise in AI and software quality assurance to ensure our customers realise the full potential of their technology innovation programs.

IMPACT OF ARTIFICIAL INTELLIGENCE ON BUSINESSES

Developments in AI are changing the way we work and live. The speed of innovation in this area is rapid and we're seeing unprecedented levels of engagement in exploring the potential of AI solution across both the public and private sectors. Current industry analysis forecasts that 30% of all knowledge workers' tasks will be augmented by generative AI by 2027, and an overall 11% increase in labour productivity enterprise-wide due to generative AI is expected. Cost decreases of more than 20% are being realised now in business functions such as HR.

Areas being impacted by AI capabilities include:



Data and Analytics



Forecasting



Customer Engagement Processes



Business Process Automation



Knowledge management



Code Generation and Content Creation

The drive to capture the benefits of AI-enabled solutions while simultaneously managing the associated requirements of the emerging global framework of Responsible AI standards and legislation will become a key theme in every enterprise-scale technology portfolio.

As the application of AI technology accelerates, good governance of these systems will be essential to building and maintaining trust.

AI SOLUTION INTEGRATION & ASSURANCE

While AI solutions are easier than ever to acquire without requiring specialist capabilities in machine learning development, “off-the-shelf” AI solutions need to be tailored to your specific tasks and data context to perform well. KJR is able to support you in the selection, validation, optimisation, integration, and deployment of the right AI solution, ensuring it works reliably with your data, delivers value and complies with any relevant regulatory requirements.

KJR’s AI Solution Integration & Assurance services leverage our Validation Driven Machine Learning methodology to guide the deployment of pre-trained AI models and the development of bespoke AI solutions, and apply a systematic validation and monitoring process across the whole AI lifecycle.



DATA QUALITY & AI READINESS

Leveraging AI to deliver specific value for *your organisation* critically depends on the quality of *your data*. While most enterprise-scale organisations have some form of unified data repository, the reality is that such repositories are far from comprehensive and enterprise data remains fragmented and variable in quality. Enabling the right access to the right data, across a wide variety of formats, is an essential step in deploying AI effectively. In our experience, 80% of any AI adoption effort goes toward data management.

KJR is able to work with your existing data infrastructure to identify critical data governance requirements, implement essential data quality and risk controls, such as de-identification, and implement essential data integration pipelines. By maturing your data quality and data management practices, the cost of AI adoption and the time to value can both be significantly reduced.



AI GOVERNANCE

A key element in any AI adoption program is to get the right governance processes in place, not just at a policy level, but in terms of practical quality assurance monitoring and control. Similar to cybersecurity, good AI governance needs the right combination of accountability, technology, tools and processes to manage risk effectively. KJR can help you establish the right processes at each level. For those requiring ISO/IEC 42001 certification, our accredited ISO/IEC 42001 Implementation Leads can assist you in getting your AI Management System in place.



INDUSTRY EXPERIENCE

Our expert team collaborates closely with clients across diverse industries, helping them navigate the complexities of AI implementation to achieve remarkable results. The following provides a snapshot of some of our projects:

KJR worked closely with one of our long-term clients in the utilities sector to unify data across a range of disparate sources so that they could take advantage of new AI-enabled capabilities that would allow them to detect service inefficiencies and predict customer billing.

The project required a complex data ingestion and transformation process using Databricks on the Microsoft Azure platform, along with the use of an predictive AI model. KJR conducted an AI Risk and Impact Analysis that identified the key controls and risk mitigations appropriate for the application of AI to sensitive data in a customer facing context. The AI assurance process was complemented by thorough testing of data quality throughout the process to assure that data had been ingested and transformed correctly and was secure. Successful project outcomes included **improved operational efficiency, enhanced end-customer satisfaction, and improved revenue stability.**

AI & DATA QUALITY ASSURANCE

HEALTHCARE DATA ASSURANCE

Datarwe provides a secure data access platform that enables AI models to be applied to high quality clinical data. These AI generated insights enable clinicians to make targeted improvements to intensive care processes using on local real-world evidence.

KJR helped Datarwe to ensure the data platform was built correctly, was scalable, and secure. Enabling pre-trained models to be improved using local data, KJR's approach to AI Assurance included understanding exactly what kinds of errors were being made, and then re-training algorithms to correct these errors.

Multiple layers of data protection were implemented, including applying AI-enabled data de-identification to protect privacy, strict control of data flows within the system, and managing rigorous access control protocols. **The platform has been successfully implemented across major hospitals and continues to grow.**

[Learn More](#)

datarwe
Real world data for AI enabled medical innovation

INDUSTRY EXPERIENCE

A federal government department established a dedicated data analytics branch to enhance the use of data and evidence in policy development and decision making. KJR provided a range of data quality and data governance services, including test automation and production data quality monitoring.

KJR was able to increase the coverage of data quality monitoring from 5% to 80% as part of the overall DevOps delivery process. A key focus of KJR's work was in establishing automated processes for checking data quality as part of the general data transformation stage.

DATAOPS

RESPONSIBLE AI FRAMEWORK

SmartAIConnect provides an end-to-end solution for AI model implementation on video security IP cameras. The company developed a Responsible AI Framework that enables comprehensive analysis and documentation of the Machine Learning models deployed on AI-enabled security cameras. As more and more cameras ship with AI enabled by default, organisations need to apply significantly more rigour to ensure their camera networks are not misused.

KJR worked with SmartAIConnect to assure the development the platform and support the alignment of the framework to emerging national and global standards for AI governance. By including support for risk assessment tracking, bias checking, managed deployments, production monitoring and audit trail support, SmartAIConnect's Responsible AI Framework provides a practical tool for collecting the quality assurance evidence produced by the KJR's VDML process. KJR is proud to be part of SmartAIConnect's journey in developing this industry-leading AI framework for managing risks associated with deploying machine learning models on the edge.



AI solutions don't exist in a vacuum. They need to integrate with the rest of your day-to-day technology platform. Naturally our AI specific services align with our broader software quality assurance and DevSecOps offerings, enabling a complete software quality engineering approach to AI adoption.



INDUSTRY EXPERIENCE



HUMAN-MACHINE TEAMING

Supported by Trusted Autonomous Systems, KJR led a group of leading Queensland tech companies to develop a digital platform for documenting world-heritage Aboriginal rock art dating back thousands of years in Far North Queensland.

The TAS project focussed on leveraging human-machine teaming to identify and protect these high-value cultural assets. The project specifically addressed the challenge of developing a process for using machine-learning, drone autonomy, and edge computing to rediscover, document, and maintain applicable sites.

KJR developed and deployed machine learning models to support mission planning and site inspections. Drone technology was used for data collection from which machine learning techniques assisted in the identification and protection of high-value assets. The integration of machine learning into this project was instrumental in demonstrating a more scalable and efficient approach to rock art conservation compared to relying solely on human effort. Importantly, traditional owners were engaged in the process of labelling training data and assessing the performance of the model.

A number of opportunities have arisen from this project to equip First Nations communities across Cape York with capability to support cultural and land care goals, as well as adjacent commercial and defence related goals.

[Learn More](#)



OUR HISTORY

1997

With Y2K approaching, demand was high for technology and software testing. K.J. Ross and Associates was established in a garage on the Gold Coast by Kelvin J. Ross in 1997.

NOW

KJR has now grown to approximately 120 staff across four offices nationally. We're proud to say we have multiple staff whom have been with us for decades, and many long-term customers we continue to work with today.

By taking a validation-driven approach to the use of machine learning technology organisations will be able to maximise the benefits of this technology while minimising the risk of unexpected or adverse outcomes.

TRAINING

Equipping your staff to have a practical understanding of AI capabilities, risks and limitations is essential to successful adoption. KJR offers a range of AI specific training courses which can be tailored to your specific needs, including:

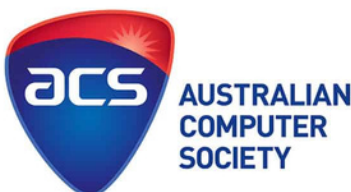
- [Executive workshop on AI Governance](#) (0.5 day)
- [Quality Assurance processes for Large Language Models](#) (1 day)
- [Validation Driven Machine Learning](#) (2 days)

TOOLS & TECHNOLOGY

KJR has extensive technical experience delivering successful outcomes for customers. Here's a snapshot:



KEY PARTNERSHIPS



Member of the AI Ethics
Committee



Founding Member of the
Queensland AI Hub

[AI White Paper](#)

[Read more](#)

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CAPABILITY STATEMENT

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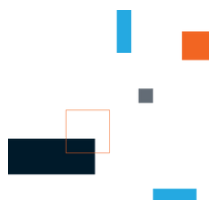
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