

How Applied AI Can Transform Various Industries



Artificial intelligence (AI) is the science and engineering of creating machines and systems that can perform tasks that normally require human intelligence, such as perception, reasoning, learning, and decision-making. AI has been advancing rapidly in recent years, thanks to the availability of large amounts of data, powerful computing resources, and innovative algorithms.

AI can be divided into two categories: general AI and applied AI. General AI is the hypothetical ability of a machine to perform any intellectual task that a human can do. Applied AI is the use of AI technologies to solve specific real-world problems in various domains.

Applied AI can bring many benefits to businesses and society, such as automating tasks, enhancing capabilities, and improving decision-making. However, applied AI also poses some challenges and risks, such as ethical, technical, and social issues. Therefore, it is important for businesses and society to understand the potential and limitations of applied AI, and to adopt best practices and standards to ensure its responsible and beneficial use.

In this blog post, we will explore some examples of applied AI in different industries in Australia. We will also discuss some of the benefits and challenges of AI adoption for businesses in Australia.

Marketing

Marketing is one of the domains where applied AI can have a significant impact on you. Applied AI can help marketers better understand their customers' needs, preferences, and behaviours; tailor their products and services to their customers' segments; optimize their pricing and promotions; personalize their communication and engagement; measure their performance and impact; and innovate their campaign strategies and increase their effectiveness.

For example:

Koala: is an Australian online furniture retailer that uses applied AI to optimize its customer experience. Koala uses machine learning algorithms to analyze customer data from various

sources (such as web analytics, and social media reviews) to segment its customers based on their demographics (such as age group), psychographics (such as personality traits), behaviour (such as purchase history), and feedback (such as satisfaction ratings). Koala then uses these segments to customize its website design (such as layout), product recommendations (such as mattress size), pricing (such as discounts), and communication (such as email campaigns) for each customer segment.

Quantium: is an Australian data analytics company that uses applied AI to help its clients improve their marketing effectiveness. Quantium uses machine learning algorithms to process large amounts of data from various sources (such as transaction records) to generate insights into customer behaviour (such as purchase patterns), market trends (such as demand

fluctuations), competitor actions (such as price changes), and external factors (such as weather conditions). Quantum then uses these insights to provide its clients with predictions (such as sales forecasts), recommendations (such as optimal product mix), and optimizations (such as dynamic pricing) for their marketing decisions.

Here are some of the benefits of using applied AI to run marketing campaigns:

Increased customer satisfaction by pitching more relevant products/services according to their needs.

Increased customer loyalty by providing a more personalized form of communication/engagement.

Increased customer acquisition by building more effective promotions/campaigns based on data.

Increased customer retention by providing more timely feedback/resolution with the help of automated AI communication tools.

Increased revenue by offering more optimal pricing/strategies based on market and industry trends.

Education

Education is another domain where applied AI can have a significant impact. Applied AI can help educators better understand their students' needs, abilities, and progress; tailor their curriculum and pedagogy to their students' levels; optimize their assessment and feedback; personalize their instruction and support; measure their

performance and impact; and innovate their teaching process and strategies.

For example:

OpenLearning is an Australian online learning platform that uses applied AI to enhance its learning experience. OpenLearning uses machine learning algorithms to analyze student data from various sources (such as course activities, quizzes, and discussions) to segment its students based on their learning styles (such as visual, auditory, kinesthetic), learning goals (such as knowledge, skills, attitudes), learning outcomes (such as grades, completion, satisfaction), and learning feedback (such as comments, ratings). OpenLearning then uses these segments to customize its course design (such as content, and format), course recommendations (such as topics, and courses), course delivery (such as pace, and mode), and course evaluation (such as rubrics, badges) for each student segment.

Literatu is an Australian data analytics company that uses applied AI to help its clients improve their education outcomes. Literatu uses machine learning algorithms to process large amounts of data from various sources (such as student records, test scores, and surveys) to generate insights into student performance (such as strengths, weaknesses, and gaps), student engagement (such as attendance, participation, motivation), student well-being (such as stress, anxiety, happiness), and student potential (such as interests, talents, aspirations). Literatu then uses these insights to provide its clients with predictions (such as achievement forecasts), recommendations (such as intervention plans), and optimizations (such as

resource allocation) for their education decisions.

These are some of the benefits of using applied AI in education:

Increased student satisfaction by providing a more effective curriculum.

Increased student engagement and potential by providing more personalized individual instruction/guidance/opportunities.

Increased student achievement by providing more effective assessment/feedback.

Manufacturing

Manufacturing is another domain where applied AI can have a significant impact. Here, applied AI can help manufacturers better understand their production processes, resources, and outputs; tailor their products and services to their customers' needs; optimize their operations and logistics; enhance their quality and safety; measure their performance and impact; and innovate their offerings and strategies based on data and more realistic and effective projections.

For example:

Titomic is an Australian additive manufacturing company that uses applied AI to revolutionize its production process. Titomic uses machine learning algorithms to analyze production data from various sources (such as sensors, cameras, scanners) to segment its production parameters based on their material properties (such as density, strength, durability), product specifications (such as shape, size, function), production requirements (such as speed, cost, efficiency), and production feedback (such as defects, errors, failures). Titomic then uses these segments to customize its production

process (such as nozzle design), production control (such as temperature, and pressure), production optimization (such as layer thickness), and production evaluation (such as quality testing) for each production segment.

Swinburne University of Technology is an Australian research institution that uses applied AI to help its partners improve their manufacturing outcomes. Swinburne uses machine learning algorithms to process large amounts of data from various sources (such as industry reports, market research, and customer feedback) to generate insights into manufacturing trends (such as demand changes), manufacturing opportunities (such as new markets), manufacturing challenges (such as skills shortages), and manufacturing solutions (such as best practices). Swinburne then uses these insights to provide its partners with predictions (such as revenue forecasts), recommendations (such as product development), and optimizations (such as process improvement) for their manufacturing decisions.

Here are some of the benefits of using applied AI in manufacturing effectively:

Increased customer satisfaction by providing more customized products/services.

Increased customer loyalty by providing more reliable products/services.

Increased customer acquisition by providing more competitive products/services.

Increased customer retention by providing more responsive products/services.

Increased revenue by providing more efficient products/services.

And some of the challenges of using applied AI in all these industries that needs special attention are:

Maintaining data quality by ensuring the accuracy/completeness/timeliness of data sources.

Assuring data privacy by ensuring the consent/protection/security of production data.

Maintaining data ethics by ensuring the fairness/transparency/accountability of data analysis.

Strict data governance by ensuring the compliance/standards/regulation of data usage.

Conclusion

Now, to sum it all up, applied AI is the use of artificial intelligence technologies to solve real-world problems in various domains. It can automate tasks, enhance capabilities, and improve decision-making in many industries. However, applied AI also poses some challenges and risks, such as ethical, technical, and social issues. Therefore, it is important for businesses and society to understand the potential and limitations of applied AI, and to adopt best practices and standards to ensure its responsible and beneficial use for all.

Melbourne | Sydney | Brisbane

Marketing@visglobal.com.au
+61 475 230 884

www.visglobal.com.au