THE IMPACT OF AI ON THE BROADER BALLARAT REGION

BALLARAT REGION ARTIFICIAL INTELLIGENCE NETWORK

AUTHOR: DR. ROBERT LAYTON
CONTACT: HELLO@BRAIN.NET.AU
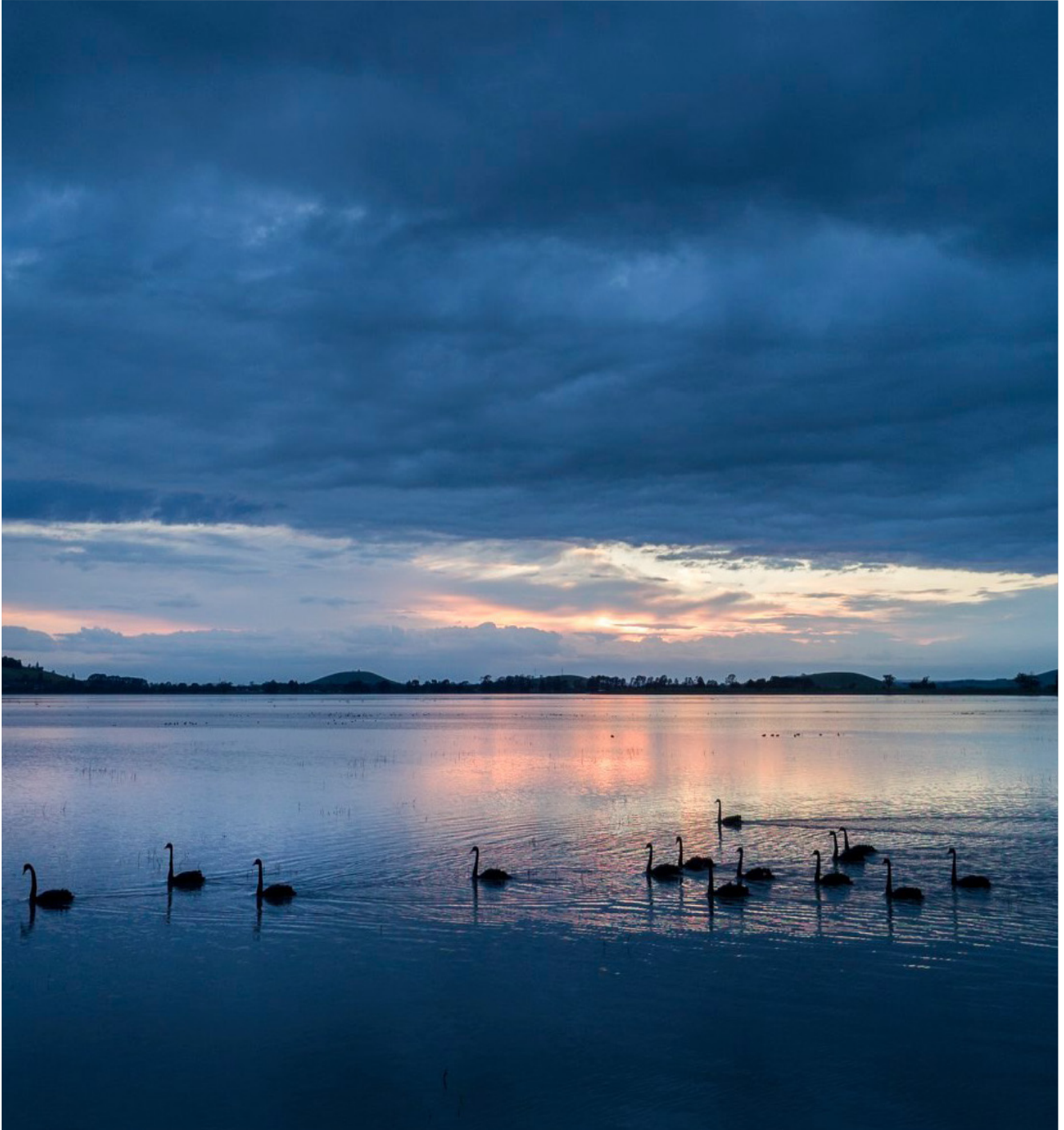
DATE: 08-01-2025

BRAIN
BALLARAT REGION ARTIFICIAL INTELLIGENCE NETWORK

EXECUTIVE SUMMARY

AUTHOR: DR. ROBERT LAYTON

KEY TAKEAWAYS

At the Ballarat Region Artificial
Intelligence Network, and working
with Federation University Australia,
we conducted a survey of businesses,
government, and community in the Ballarat
Region. We found concerns about the
impact of AI, but there are opportunities
to take advantage of. Our key findings
were:

1. A new wave of AI advancements is here,
with applications in areas that previously
were less affected by automation and AI
- for example professional workers. AI
advances will significantly displace
workers or reduce the value of their
work. While opportunities will likely
arise, these positive effects will not
beequally shared across the community,
potentially increasing inequality.

2. The Ballarat Region Artificial
Intelligence Network, BRAIN, has
been established as a nexus point for
investigating the impact of AI in the
Ballarat and surrounding region. This
region has unique characteristics that
will determine the impact of AI on the
people who live there, the businesses
they work in, and their communities.

3. We are looking for investment,
opportunities, and viewpoints from
business, government, academia and the
community. We will continue to undertake
and support research, development, and
policy recommendations to assist the
region to take advantage of AI and reduce
the negative impacts.

EXECUTIVE SUMMARY

BACKGROUNDS:

We are now experiencing a new wave of artificial intelligence (AI) advancements and applications. Its impact on industries will be substantial, and will affect jobs historically considered "safe from AI", i.e. "skilled work". Previous waves of automation have largely led to reductions in blue-collar work, with white-collar jobs less impacted. The next wave will likely target most workers in most industries. The key new technology in this space are Large Language Models (LLMs), such as ChatGPT, which are capable of generating human-like text. However LLMs are just one of a wide range of new and improving technologies in this wave of AI advancements.

We have created BRAIN to investigate the impact of AI into the broader Ballarat region - loosely defined as the council areas of Ballarat, Pyrenees, Hepburn, Moorabool, and Golden Plains, but with an eye towards other areas in the Western Victorian region. The aim of BRAIN is to provide information on the impact of AI in the region, and then to provide recommendations and strategies to leverage AI for prosperity and well-being, and limit the negative impacts. BRAIN is a non-profit entity with a panel of experts across different industries in the area. Further, we welcome and encourage input from others who have expertise, concerns, or interest in this area.

BRAIN is undergoing an initial review of existing information on the impact of AI on regional communities. To do this, we have led discussions with a wide range of people in different industries, engaged research teams to review published literature, and are collating this information. This document represents our initial findings. A more thorough report and findings will follow in Q4 2024. Contact us if you'd like a say, or to review this document before public release.

PRELIMINARY FINDINGS:

The impact of this new wave of AI is already being felt in a number of industries, and has been a hot topic in news articles. For one example from a very wide range of articles, the ABC article 'We all got AI-ed': The Australian jobs being lost to AI under the radar (Lavoipierre, 2023) discusses how AI is already leading to job losses in Australia. Job losses are particularly focused on customer service, administrative tasks, and manufacturing. Automation could disproportionately impact low-skilled jobs, increasing inequality. However there are opportunities with AI creating jobs, which emphasises the need for upskilling and reskilling programs. Policymakers and businesses can manage this transition to minimise the negative effects on the workforce.

The IMF's 2024 report states that AI will affect almost 40 percent of jobs around the world, however in advanced economies like Australia nearly 60% of jobs are labelled as "high exposure" (IMF, 2024). Regions like Ballarat would need to invest in AI technologies and workforce training to stay competitive, and policy needs supportive regulations including safety nets and reskilling programs, to ensure that the beneficial impacts are inclusive and the negative impacts are less felt.

EXECUTIVE SUMMARY

Note: *This report
does not reflect
the personal
views of members
of the group.
The findings are
meant for broader
discussion and
not as specific
advice.*

The exact figure varies from report to report, however the general consensus is that a large number of jobs will be impacted by AI, and many of those negatively impacted. Large numbers of people currently employed will find their skills either unnecessary or lesser-valued. New technologies have historically led to both this displacement but also new opportunities for people and businesses. The Internet, for example, has led to a long-term decline in retail revenue for bricks-and-mortar businesses, but has led to whole new industries being created. What are those AI-enabled opportunities for the Ballarat region, and how can we best leverage those going forward?

AI systems are known to have an issue with bias, inherent from the datasets it was trained from. Our findings suggest several biases that are inherent in datasets and models, and as such do not leverage our strengths and account for the challenges we face as a regional area. Research has started in this area, and we wish to include and extend these findings to help with policy and applications in regional areas, specifically Ballarat. These biases include those of gender or racial issues, but also a metro bias that can create difficulties applying information derived from AI in a regional setting. Research such as 'The Road to (Gundag)AI' highlights the challenges faced by regional SMEs due to AI biases (Sheldrick, Chang & McKay, 2022).

We encourage stakeholders to engage with BRAIN and contribute to our ongoing research to ensure that AI advancements benefit the entire Ballarat region. BRAIN is a non-profit organisation, with funding from industry sponsors and other funding sources. For more information, visit our website at ***https://brain.net.au*** or email us at ***hello@brain.net.au***.

REFERENCES

LAVOIPIERRE, A. (2023, DECEMBER 3).

"WE ALL GOT AI-ED": THE AUSTRALIAN JOBS BEING LOST TO AI UNDER THE RADAR. ABC NEWS. **LINK**

IMF. (2024, JANUARY 14).

AI WILL TRANSFORM THE GLOBAL ECONOMY. LET'S MAKE SURE IT BENEFITS HUMANITY. **LINK**

SHELDRICK, S; CHANG, S; & MCKAY, D (2022).

"THE ROAD TO (GUNDAG)AI": INVESTIGATING THE IMPACT OF AI ON REGIONAL AND REMOTE SMES". PACIS 2022 PROCEEDINGS. **LINK**

The AI Era won't wait. Neither will Ballarat.

DR. ROBERT LAYTON
CO-FOUNDER & DIRECTOR (RESEARCH & INNOVATION)

Connects research and industry to guide BRAIN's real-world AI pilots. Advocates responsible, human-centred use while keeping projects evidence-based and future-focused.

At BRAIN, everything we do is guided by a leadership team focused on real outcomes for the Ballarat region— connecting people, projects, and partnerships so ideas turn into impact.

BRAIN

BALLARAT REGION ARTIFICIAL INTELLIGENCE NETWORK