Western Australia

Regulations of Artificial Intelligence Bill 2023

Explanatory Memorandum

The risks of AI on employment in Western Australia include the potential for job displacement as AI systems automate routine tasks, particularly in industries such as manufacturing, transportation, and customer service. Additionally, there is a concern that certain job roles may become obsolete or require significant upskilling to remain relevant in an increasingly AI-driven economy. Whilst also factoring in the need to future-proof the education system so that students can graduate knowing that they are able to be employed in sectors which require a greater need for both numerical and digital literacy.

The impacts of AI on education in Western Australia are significant, with AI technologies offering opportunities for personalized learning experiences and enhanced educational resources. However, there is a need to address challenges such as ensuring equitable access to AI-powered tools and ensuring Cooperation with the private sector is critical in addressing AI concerns. Corporate risk mitigation plans provide a structured approach to identifying and addressing potential risks associated with AI systems. By implementing these plans, businesses can proactively protect against cyber intrusion, data breaches, privacy risks, job displacement, and ensure transparency, thereby safeguarding their operations and reputation in an increasingly AI-driven landscape.

This Bill will regulate the use, development, and provision of artificial intelligence (AI) systems in Western Australia, with a focus on ensuring transparency, fairness, and accountability. The Bill also aims to mitigate risks associated with AI implementation in businesses and address the impact of automation on employment. Additionally, it seeks to improve educational standards and promote the use of AI in the education sector.

Artificial intelligence poses significant risks, including the potential for unintended consequences, algorithmic biases, and job displacement, which necessitate careful consideration and robust regulation to safeguard against harmful outcomes. Without proper oversight and ethical guidelines outlining the appropriate development and deployment of AI, AI systems can amplify existing societal inequalities, compromise privacy and security, and even raise existential threats if deployed without adequate precautions.

The Western Australian government needs to commission an annual report on the impacts of AI to understand its effects on the labour market, education system, and regulatory frameworks. This report will enable policymakers to make informed decisions, adapt regulations, and plan for the future in order to maximize the benefits and address the challenges posed by AI technology.

The rise of artificial intelligence (AI) presents significant risks to the workforce in Western Australia. Firstly, there is a potential for job displacement as AI technologies automate routine tasks, leading to unemployment and a need for workers to acquire new skills. This could create a mismatch between available jobs and workers' skill sets. Additionally, AI deployment can worsen existing inequalities and social disparities, as workers with lower skill levels or in highly automatable industries may struggle to find new employment opportunities.

Western Australia

Regulations of Artificial Intelligence Bill 2023

A Bill for an Act to introduce regulations to address artificial intelligence and the impacts associated with its use.

Part 1 — Preliminary

1. Short title

This is the *Regulation of Artificial Intelligence Act 2023*.

2. Commencement

This Act commences on the day on which this Act receives Royal Assent (***assent day***).

3. Terms used

In this Act—

AI means a computer-based program or software that utilises machine-learning algorithms capable of interpreting data to make predictions to simulate human intelligence or perform functions that typically require human intelligence;

AI training means the process of teaching an AI system to interpret data and improve its performance by exposing it to a large amount of raw data and adjusting its coding to optimise its performance;

AI systems refers to systems that simulate human intelligence processes by machines, especially computer systems, for specific appications including, but not limited to, expert systems, natural lanugage processing, speech recognition, machine vision and machine learning.

ATAR means the Australian Tertiary Admission Rank;

automation means the replacement of an employee by an automatic system;

biometrics means unique physiological or behavioural characteristics of an individual that can be measured and analysed for identification or authentication purposes, including fingerprints, facial features, iris patterns, voiceprints, and even behavioural traits like gait or typing patterns;

clear communication means, in relation to employment, the employer must provide written notice to the affected employee, clearly stating the proposed changes, the reasons for the changes, and the anticipated date of implementation;

CMP means the Corporate Mitigation Plan, an autonomously created document outlining the steps and processes corporations will undertake to increase transparency with consumers and promote more ethical handling of artificial intelligence in the business's activities;

damages means any physical, psychological or other kind of harm that AI technology may cause to users, the public or property;

data selection bias means the phenomenon whereby data used in the training of an AI system is unrepresentative, inaccurate, or skewed, leading to biased outcomes or predictions;

discrimination refers to prejudicial treatment to users or public on the basis of race, ethnicity, gender, sex, sexual preference, age, physical or mental abilities or characteristics protected under legislation;

development of AI means the process of creating and improving computer systems or machines that can perform tasks that typically require human intelligence;

employee means a person employed for wages or salary;

employer means a person, company, or organization that pays people a wage or salary for work;

employment standards refers to legislation that sets out minimum rights and responsibilites of employees in the workforce;

financial information means any information that relates to an individual's money, assets, or debt;s

general means a pathway for students in years eleven and twelve which ensures that students receive the points required to graduate secondary school, without receiving an ATAR score;

health data means any data that relates to an individual's medical status or medical history including their physical, psychological and mental health;

in-loop human oversight means the operation of an AI system in which a human is directly involved in and has control over all processes of said system;

interaction bias means the alteration of an AI system's behaviours due to inputs from and interactions with users, that lead to biased behaviours or outputs;

latent bias means the inaccurate conflation of two things or concepts as being equivalent within an AI system;

monitoring means the systematic tracking, observation, and analysis of various activities, behaviours, or data within a work environment to ensure compliance with policies and regulations;

NAPLAN means the National Assessment Program – Literacy and Numeracy;

numerical literacy means the ability to apply number concepts and arithmetic skills in daily life and the ability to interpret quantitative information presented to students;

on-loop human oversight means the evaluation, review, or auditing of outputs and processes of an AI system by a human, after these outputs have already been generated or these processes have already occurred;

personally identifiable information means data or information that, either on its own or in combination with other data, can directly or indirectly identify a specific person, including full names, addresses, phone numbers, email addresses, social security numbers, passport numbers, driver's license numbers, biometric data, financial account information, and any other data that can be linked to a particular individual;

provision means the process of making AI systems available to individuals, organizations, or the general public;

sale means the transaction or process of exchanging AI-related products, services, or technologies for a monetary value;

sensitive information or ***data*** means digital information or data that if exposed or compromised could lead to financial loss, identity theft, reputational damage, or other adverse consequences;

SCSA means the School Curriculum and Standards Authority;

secondary school means an institution which provides education for children from years seven to twelve;

secondary student means a student enrolled in a secondary school and actively studying from years seven to twelve;

small business means a business that has less than 30 employees;

small grant means a grant worth between $1,000 and $5,000;

SMS means for State Mitigation Standard, which is the degree of ethical and functional soundness, that a business’s Corporate Mitigation Plan must meet;

social score means a system or mechanism used to evaluate and assign a numerical value or rating to individuals based on their social behaviour, actions, or other factors;

STEM means Science, Technology, Engineering and Mathematics;

TAFE means Technical and Further Education.

user means a human who interacts with an AI system to perform some function or achieve some goal; and

VET means Vocational Education Training.

Part 2 — Regulations for the provision and development of AI

4. Prohibited AI functionalities

The use, development, sale or provision of any of the following AI functionalities or capabilities will be prohibited -

(a) intentionally misleading, manipulating or otherwise deceiving a huuman user through the provision of false information, recommendations or other means;

(b) storing or sharing sensitive or personal user data and information without use consent and knowledge in the form of—

(i) biometric data;

(ii) geolocation data;

(iii) financial information; and

(iv) health data;

(c) evaluating a human to generate a ‘social score’ or similar evaluation; and

(d) providing informationthat may endanger a user; or performing functions that violate the criminal code; and

(e) providing a user with information that may enable violations of the criminal code

5. Transparency of AI systems

(1) All providers and developers of AI systems must ensure that any AI system they provide or produce—

(a) discloses all its capabilities and functions;

(b) performs only the functions that are disclosed to users; and

(c) discloses that they are an AI to all users.

(2) All providers and developers of AI systems must disclose—

(a) the mode of operation of said AI system; and

(b) any material used in the training of said AI system.

(3) All users of AI systems in decision-making processes must disclose this to any individual or group potentially impacted by said decisions.

6. Fairness of AI systems and equality of access

All providers and developers of AI systems must—

(a) ensure that AI systems do not possess latent or data selection bias as a result of training;

(b) regularly monitor and audit active AI systems for interaction bias, and correct systems that display signs of such bias; and

(c) take all reasonable steps to ensure that their AI is fully accessible to all users.

7. Human oversight of AI systems

Human oversight, in the form of their in-loop or on-loop human control, is required at all times for any AI system employed in—

(a) critical infrastructure services, including health and construction;

(b) law enforcement activities;

(c) the operation of autonomous vehicles; and

(d) the operation of medical equipment or provision of medical services.

8. Accountability and liability AI systems

The developer or provider of an AI system may be held partially or fully liable for—

(a) malfunctions of said AI system that are not a result of the user and result in damages to humans or property;

(b) discrimination by said AI system against an individual or group of poeple during its utilisation or the ability or function to discriminate against a user; and

(c) said AI system conducting itself in any illegal activity without the control or input of a user.

9. Enforcement

All aforementioned regulations shall be enforced by the Department of Mines, Industry Regulation and Safety and its relevant Minister.

Part 3 — Corporate Risk Mitigation Plan

10. Mitigation plans

All corporations must develop a corporate mitigation plan that outlines steps and processes for achieving compliance with AI provision and development regulations, and outlines processes intended to—

(a) minimise the risk of cyber intrusion and data breaches, especially for breaches of user privacy;

(b) minimise the impacts of job displacement;

(c) guarantee maximum corporate transparency; and

(d) plan for future artificial intelligence adoption and integration.

11. Requirement to develop a mitigation plan

(1) Businesses of the following structures utilising AI are required to develop a corporate mitigation plan—

(a) discloses all its capabilities and functions;

(b) performs only the functions that are disclosed to users; and

(c) discloses that they are an AI to all users.

(2) All providers and developers of AI systems must disclose—

(a) the mode of operation of said AI system; and

(b) any material used in the training of said AI system.

12. Enforcing the creation of corporate mitigation plans

All relevant corporations using AI systems, outlined in section 4, failing to develop a CMP will be subject to the following sanctions—

(a) formal investigation by the Department of Mines, Industry Regulation and Safety;

(b) suspension of corporate activities utilising artificial intelligence;

(c) assignment of Department of Mines, Industry Regulation and Safety officer to direct the creation of a CMP; and

(d) other sanctions determined by the Department of Mines, Industry Regulation and Safety during formal investigation.

13. State Mitigation Standard

(1) CMPs developed by corporations must meet a certain standard and degree of soundness, determined by the Department of Mines, Industry Regulation and Safety.

(2) Businesses will be subject to checks and assessments of their CMPs, conducted annually by the Department of Mines, Industry Regulation and Safety.

(3) Checks and assessments can be called outside of the annual cycle by the AIRCA under the following circumstances—

(a) the corporation is under financial review;

(b) the corporation files for bankruptcy;

(c) the corporation is flagged following monitoring and surveillance work by the Department of Mines, Industry Regulation and Safety;

(d) the corporation is flagged following statutory reports from auditors, registered liquidators, Australian financial services (***AFS***) licensees and Australian credit licensees (***credit licensees***); or

(e) other circumstances deemed suitable by the Department of Mines, Industry Regulation and Safety.

14. Failure to meet state mitigation standard

(1) Corporations failing to meet the state mitigation standard will be given a period of 6 months to redevelop the CMP—

(2) If the CMP is not redeveloped to match the SMS, the following actions will be undertaken by the Department of Mines, Industry Regulation and Safety—

(a) suspension of corporate activities utilising artificial intelligence; and

(b) other sanctions determined by the Department of Mines, Industry Regulation and Safety during a formal investigation.

Part 4 — Report on the Impact of Artificial Intelligence

15. Annual Report on the Impact of Artificial Intelligence in Western Australia

(1) The Minister responsible for the Department of Mines, Industry Regulation and Safety will commission an independent annual report detailing the impact of artificial intelligence on jobs and employment in Western Australia.

(2) The report will be known as the *Annual Report on the Effects of Artificial Intelligence in Western Australia*.

(3) The Department of Mines, Industry Regulation and Safety may work alongside any other government department to compile the information in the report.

(4) The report must contain the following information—

(a) the impact of artificial intelligence on the labour market of Western Australia;

(b) the number of jobs lost or gained due to artificial intelligence;

(c) the industries and areas most affected by the change in the labour market;

(d) the number of offences committed against this Act in the previous year;

(e) the impact of artificial intelligence on the education system of Western Australia;

(f) the level of use of artificial intelligence by both students and teachers, including which areas have seen the widest uptake of artificial intelligence;

(g) the effectiveness and relevance of AI provision and development regulations;

(h) the effectiveness and relevance of CMPs and their governing SMSs;

(i) estimates of the how the statistics given in paragraphs (a) to (h) are projected to change over the next decade; and

(j) which university and TAFE courses are to be considered low risk for the purposes of the RSSL, outlined in Part 6 Division 3.

(5) The first annual report must be laid before both the Legislative Assembly and the Legislative Council within 1 year and 6 months of the assent day, and all subsequent reports must be submitted within 1 year intervals.

Part 5 — Artificial Intelligence and the Workforce
Division 1 — Introduction of AI to the Workplace

16. Notification of Changes Affecting Employees due to Artificial Intelligence Systems

(1) Any employer seeking to implement an artificial intelligence system that is likely to result in the reduction of an employee's working hours, or the termination of their employment, must provide clear communication to the affected employees at least six months in advance.

(2) It is the responsibility of the employer to maintain records of all notifications provided to employees regarding changes affecting their employment.

17. Responsibility to Retrain

(1) Employers must participate in efforts to retain any employees at risk of losing their jobs to an introduced Artificial Intelligence system.

(2) Employers are responsible for integrating employees who have lost their current role due to the introduction of an Artificial Intelligence system, into a new role within the company through re-skilling and re-educating to meet the employment standards for the role.

(3) Employers are responsible for running workshops or subsiding relevant courses to qualify affected employees for new roles that are suited to the person's wants and abilities within the company.

(4) The Department of Mines, Industry Regulation and Safety may publish further guideliens regarding the responsibilities to the employers to reskill their employees.

18. Small Business Retainment Small Grant

(1) Small businesses are eligible to apply through the Western Australian Governmetn website for small grant to help them over the costs of re-skilling employees in their company.

(2) Government subsides can be applied to training and course costs to ensure that small businesses who cannot cover the costs independently don't incure a fine due to invalid reskilling of employees.

Division 2 — AI Monitoring and Evaluation of Employees

18. Notification of Employee Monitoring

All employers using either a fully or partially automated system to monitor their employees must clearly communicate a notification to them detailing—

(a) the purpose of the monitoring;

(b) when and where the monitoring will take place;

(c) the rights of the employee under the law;

(d) the nature of the system monitoring them;

(e) the level of human oversight; and

(f) the criteria that is being monitored.

19. Hiring and Termination of Employment

(1) No Artificial Intelligence system may be used to hire or fire employees.

(2) While an Artificial Intelligence may collect and compile data, it may not make any recommendation as to whether a person is hired or has their employment terminated.

(3) Any decision to begin or terminate employment must be made by a human manager, who will be considered responsible for the decision rather than the Artificial Intelligence.

Division 3 — Offences

20. Employee Legal Action

Employees shall have the right to seek legal action in cases of non-compliance of the regulations set in Division 1 and Division 2 by employers, either individually or through a union.

21. Penalties for Breach of Division 1

(1) Failure to meet the requirements set out in Division 1 will result in an initial fine of $5000 for every employee affected.

(2) Employers will receive an additional fine of $1000 for every additional week beyond the initial 6-month notification period in which the employees were not notified.

22. Penalties for Breach of Division 2

(1) Failure to meet the requirements of section 18 will result in a fine of $10,000 per affected employee, and any data gathered will be ineligible to be used as grounds for termination of employment.

(2) Any firm found to have breached section 19 shall be penalised under the according law for unfair dismissal (if firing) or discrimination (if hiring).

Part 6 — Education and Employment
Division 1 — Educational Standards

23. General Auditing

(1) The Department of Education shall conduct an audit into the current Western Australian school curriculum.

(2) The Department of Education shall appoint external auditors to examine the current state of the Western Australian curriculum.

(3) Auditors shall work with existing academic review agencies to analyse current teaching and learning methods, student resuts, learning enhancement and factors affecting the quality and outcome of education to deliver a comprehensive recommendation focusing on the imrpvoement of education and standards.

(4) Auditors must work with relevant partiesi to ascertain current curriculum reuslts and produce recommendations in which curriculum standards and educational outcomes will be improved.

24. Digital Literacy

(1) The Department of Education in collaboration with SCSA shall increase the compulsory study time associated with technology-based subjects from the pre-existing pre-primary to year 8, to pre-primary to year 9, as a method of improving digital literacy among Western Australian students.

(2) Both Digital Technologies and Design and Technologies shall become a compulsory subject taken by students from pre-primary to year 9, in accordance with current SCSA curriculum.

25. Subject Amalgamation

(1) In coordination with the Department of Education, SCSA shall amalgamate any engineering elective subjects offered in lower-secondary school with the current Design and Technologies curriculum.

(2) SCSA is also to ensure that there is equal representation of both practical and hands-on skills with crucial theoretical knowledge in respective curriculums, so students can establish a better understanding of the fundamentals of engineering principle.

26. Subject Amendments

(1) SCSA, in cooperation with the Department of Education, shall abolish both Mathematics Preliminary and Mathematics Foundation subjects for year 11 and 12.

(2) Students currently studying these subjects will either have the option to continue and complete these units or change to Mathematics Essential in line with the General and VET pathways.

(3) This option in subsection (2) will only be given for the last group of year 11 and 12 General and VET students who have commenced these subjects from before assent day.

(4) Any students in year 10 shall not be able to select Mathematics Preliminary and Foundation henceforth from assent day.

27. Numerical Literacy

(1) SCSA shall increase the mathematics pre-requisite from the current range of kindergarten to year 10 to kindergarten to year 12.

(2) Students selecting either ATAR, VET, or General pathways for years 11 and 12 must select at minimum the lowest grade mathematics subject available in their chosen pathway.

(3) Students choosing the ATAR pathway must select Mathematics Applications at a minimum for both final years of schooling.

(4) Students choosing either VET or General pathways must select Mathematics Essential for both final years of schooling.

Division 2 — AI Integration

28. Audit into AI usage in schools

The Department of Education is to conduct an audit into the suitability of integrating AI into the education sector, specifically to—

(a) assisting teachers with demonstrating and explaining concepts to students through visual learning;

(b) creating personalised learning plans for students in order to maximise student productivity and learning capability; and

(c) assessing students with real-time feedback after completing online tests and exams such as NAPLAN.

29. AI usage in regional Western Australia

The Department of Education is to conduct an independent inquiry into the quality and availability of technology and the feasibility of integrating AI programs into regional schools, specifying—

(a) the current state of technological readiness of regional schools;

(b) the level of technology-based resources available to regional schools;

(c) the facilities required to integrate AI into current regional teaching plans; and

(d) any current and future problems associated with integrating AI into regional schools

Division 3 — Re-skilling and Student Support Loan

30. Establishment of the Re-skilling and Student Support Loan

(1) The Department of Education will administer a program to be known as the Re-skilling and Student Support Loan (***RSSL***).

(2) The RSSL will consist of a loan equal to $500 per fortnight, with an additional $50 for every dependent child of the recipient.

31. Fund Eligiblity

(1) The RSSF will be avaliable to any person who is studying or has been accepted to study an approved tertiary course at university (public or private) or TAFE.

(2) Approved courses are those that are deemed at low risk of increased structural unemployment due to Artificail Intelligence by the Annual Report on the Effects of Artificial Intelligence in Western Australia.

(3) If a course is no longer eligible to receive the RSSF, by no longer being deemed at low risk, any person already receiving the RSSF for that course will still be eligible for the loan for 3 years after that point, unless they complete the course before that point.

31. Loan Eligibility

(1) Debt incurred under this program will be subject to yearly indexation at a rate equivalent to the Western Australian inflation rate for that year.

(2) Any person with outstanding debts under this program may at any time make a voluntary repayment for some or all of their remaining debt.

(3) Any person with outstanding debts under this program must make a compulsory repayment of 4.5% of their income if they make a yearly income of $50,000 or more.