Australian Government | GovAI

Interactive Learning Environment

AI-powered chat application designed to help APS staff develop their skills in using generative AI technology

Department of Finance

Australian Government | GovAI

Executive Summary

Problem Faced

The APS needs to stay ahead in the responsible use of generative AI to ensure its deployment reflects and upholds Australia's AI Ethics Principles, but it currently lacks a practical training platform.

Existing methods do not offer a hands-on approach, making it difficult for staff to gain the necessary skills and confidence. This gap makes it difficult for the APS to leverage AI technology for improved service delivery and decision-making.

Solution Overview

GovAI has created an AI Training platform that provides a safe and hands-on environment for all APS employees to develop their AI skills, understand the technology's benefits and limitations, and apply their knowledge in real-world scenarios.

Key features include:

- Side panel with course content, instructions, tips, and audio guidance
- The ability to experiment with AI models from Anthropic, OpenAI, and Google.
- Training courses include beginner (covering AI basics) and intermediate (includes topics like prompt engineering).

Benefits and Impact

The AI Training platform offers several benefits, including:

- Enhancing the skill set of APS employees, demonstrating how AI technology can effectively support government operations.
- Reducing the need for external training resources, leading to cost savings.
- Fostering a culture of continuous learning and innovation within the APS.
- Providing flexibility through its open-source platform, LibreChat, which can be tailored to meet specific needs.

Widespread use would increase its value for the APS.

Target Audience and Stakeholders

The primary users and stakeholders of the environment are:

- APS users with authorised access via GovTEAMS OFFICIAL
- Learning and Development (L&D) teams across the APS.

Consultations have involved stakeholders from The Australian Public Service Commission APSLearn Team, Department of Agriculture, Fisheries and Forestry, IP Australia, Department of Employment and Workplace Relations, Digital Transformation Agency, Department of Defence, and the Australian Signals Directorate.

Consultations and feedback have been instrumental in shaping the solution

Risks and Mitigation Overview

Key risks include the potential for Official or Sensitive information to be uploaded. Only publicly accessible information should be used to minimise risks. To mitigate this, a banner is included warning users not to use Official or Sensitive information. In addition, when accessing the app via the GovAI website users must also read a disclaimer before continuing to login.

Governance and oversight mechanisms are in place to support safe and responsible use, including the logging of chat conversations by Interactive Learning Environment Admin and authentication via GovTEAMS accounts.

Use Case Status

Implemented

Use case timeline

Oct 2024: Planning/Design

Nov 2024: Prototype

Dec 2024: Demonstration to senior executives

Feb 2024: Review and Refinement

March 2024: Internal APS testing

Additional Information

As the Interactive Learning Environment is built on LibreChat which is open source, continuous improvements and community contributions make the solution better over time, addressing challenges and enhancing functionality.

To date, post training course feedback has indicated an average satisfaction rating of 4/5.

Lessons Learned

Implementing this AI use case has provided valuable insights:

- Challenges: Providing a safe space where users can learn and experiment while ensuring data privacy and security is difficult in a government environment.
- Insights: Initial user feedback indicates a genuine need for hands-on style training for emerging technologies, like AI
- Recommendations: Open-source solutions support quality improvements over time, and modular designs supports customisation.

Contact information

Responsible Entity Name

Department of Finance

Area of Entity

GovAI
Government Services Branch
Business Enabling Services Group

Use Case Website/s

Interactive Learning Environment
Training Environment Support
LibreChat Documentation

Open for Collaboration?

Yes! Feel free to explore the LibreChat documentation directly or talk to us if you have any questions.

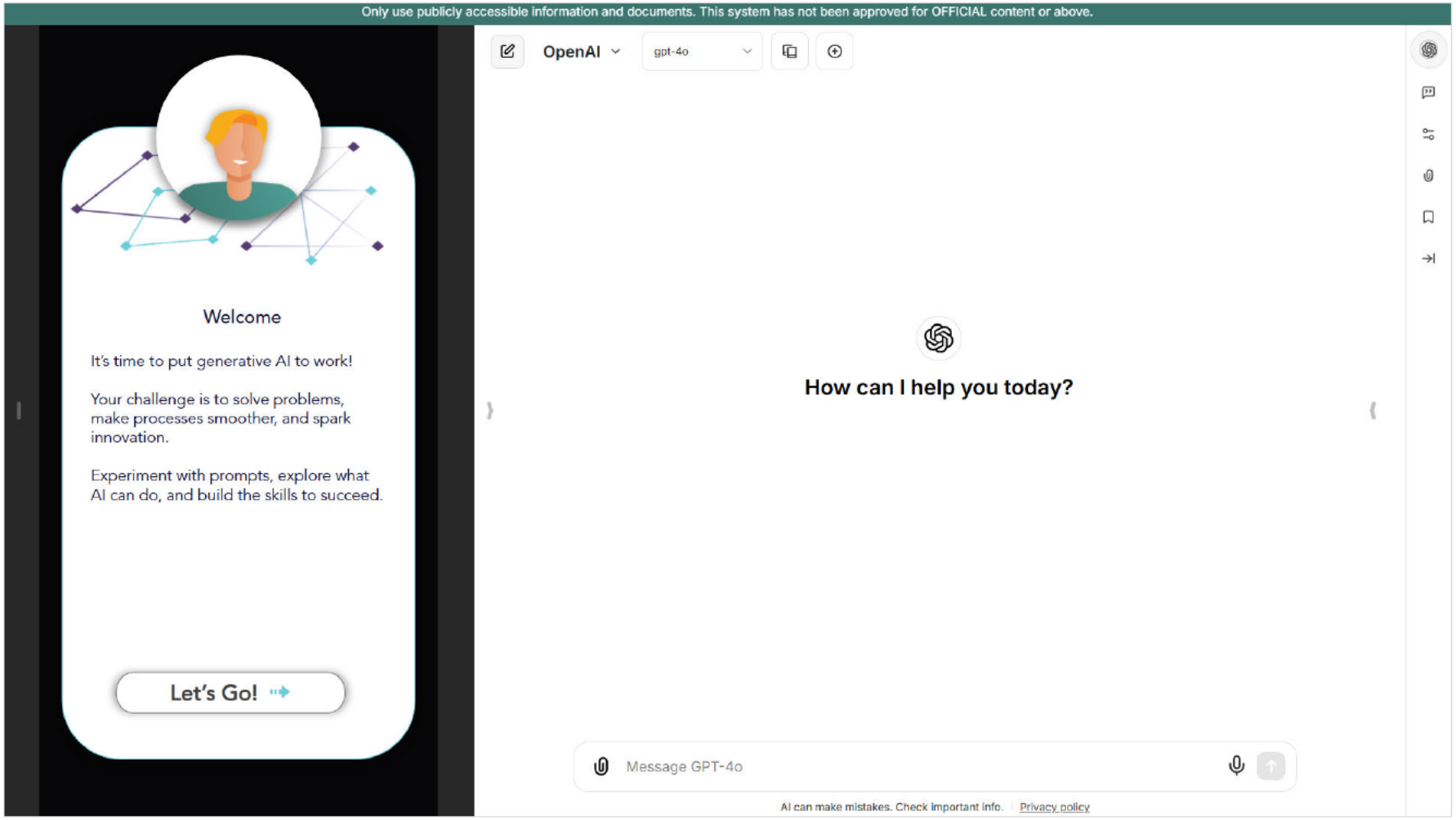
Use Case Contact

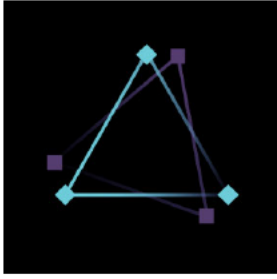
GovAI
GovAI@finance.gov.au

Use Case Owner

Angie Earl
GovAI Program Director
Government Services Branch

Screenshots





Detailed Overview

Version Control

Version	Date	Author	Description of Changes
1.0	3 Feb 2025	GovAI	Version 1 created
1.1	17 Mar 2025	GovAI	Modified based on feedback

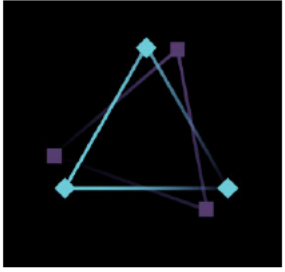
Index

Note: For details about category items in the detailed overview, see *APS AI Use Case Repository Guidance- Guidance for Use Case Owners and Editors*.

Responsible Organisation Category

Select the Classification of the Functions of Government – Australia (COFOG-A) 3-digit category that best identifies the functional area associated with your AI use case.

☒ **01 - General Public Services**	019 - General public services (other)
☐ **02 - Defence**	Choose an item.
☐ **03 - Public Order and Safety**	Choose an item.
☐ **04 - Economic Affairs**	Choose an item.
☐ **05 - Environmental Protection**	Choose an item.
☐ **06 - Housing and Community Amenities**	Choose an item.
☐ **07 - Health**	Choose an item.
☐ **08 - Recreation, Culture, and Religion**	Choose an item.
☐ **09 - Education**	Choose an item.
☐ **10 - Social Protection**	Choose an item.
☐ **11 - Transport**	Choose an item.



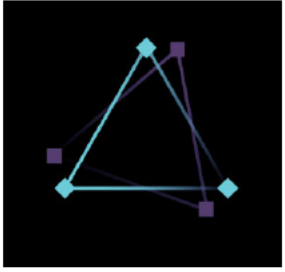
Scope of the Use Case

Use the dropdown menus below to identify the scope of your use case.

Geographical focus Choose the region for implementation from the dropdown list	National
Primary type of government interaction Choose the type of government interaction from the dropdown list	Government-to-government (G2G)
Cross-features - Sector Indicate if the use case describes a solution that can be used across sectors or in cross-sector scenarios (Yes/No).	Yes
Cross-features – Jurisdiction Indicate if the use case describes a solution that can be used across State/Federal borders or in cross-border scenarios (Yes/No)	Yes

Ethical Considerations

Accuracy, Fairness, Accessibility, Bias and Discrimination	The platform has been tested for accuracy, accessibility, bias, and discrimination. Since the training environment primarily uses pre-existing models via LibreChat, the user experience reflects the approaches taken by the creators of those models. LibreChat also proactively addresses accessibility, aiming to meet WCAG Level AA guidelines with enhancements to contrast and UI visibility for users with low vision. The training course also emphasises the importance of accuracy and ethics, encouraging responsible use of AI technologies
Privacy	The user is warned to only use publicly accessible information in the training environment.



Rights of Users	The Interactive Learning Environment does not make any AI decisions related to users.

Value of the Use Case

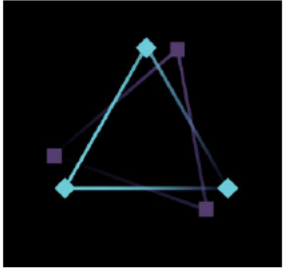
Identify the public value that the solution provides or is expected to provide. Select from the multi-select options.

Improved public service This category refers to solutions that enhance the services provided to end users, whether they are citizens or businesses.	☐ Personalised services ☐ Public (citizen)-centred services ☐ Increased quality of public information and services ☒ More responsive, efficient and cost-effective public services ☐ New services or channels
Improved administrative efficiency This category refers to solutions that increase efficiency, effectiveness, and quality while reducing costs within administrative processes, systems, and services.	☒ Cost reduction ☐ Responsiveness of government operation ☒ Improved management of public resources ☒ Increased quality of processes and systems ☒ Better collaboration and better communication ☐ Reduced risk of corruption and abuse of the law by public servants ☐ Greater fairness, honesty and equality enabled
Open government capabilities This category refers to solutions that enhance the level of openness, transparency, engagement, and communication within public organisations.	☐ Increased transparency of public sector operations ☐ Increased public participation in government actions and policymaking ☐ Improved public control of and influence on government actions and policies

AI Process Type

Select the types of tasks within government operations that the AI solution is performing or expected to perform

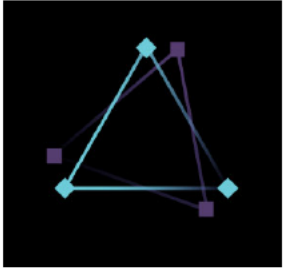
Supporting Decision Making-	☐ Taking decisions on benefits



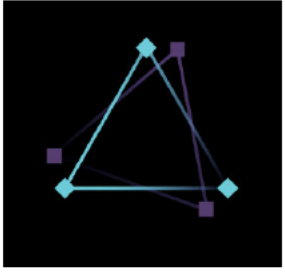
Tasks that support formal or informal agency decision-making on benefits or rights.	☐ Managing copyright and intellectual property rights
Analysis, monitoring and regulatory research – Tasks that collect or analyse information that shapes agency policymaking.	☒ Information analysis processes ☐ Monitoring policy implementation ☒ Innovating public policy ☐ Prediction and planning
Enforcement – Tasks that identify or prioritise targets of agency enforcement action.	☐ Smart recognition processes ☐ Management of auditing and logging ☐ Predictive enforcement processes ☐ Supporting inspection processes ☐ Improving cybersecurity ☐ Registration and data notarisation processes ☐ Certification and validation processes
Internal management – Tasks that support agency management of resources, including employee management, procurement, and maintenance of technology systems.	☐ Internal primary processes ☒ Internal support processes ☐ Internal management processes ☐ Procurement management ☐ Financial management and support
Public services and engagement – Tasks that support the direct provision of services to the public or facilitate communication with the public for regulatory or other purposes.	☐ Engagement management ☐ Data-sharing management ☐ Governance and voting ☐ Payments and international transactions ☐ Supporting disintermediation ☐ Authentication of self-sovereign digital ID services ☐ Service integration ☐ Service personalisation ☐ Tracking of goods and assets along the supply chain

AI Technologies Utilised

Select the types of AI technologies proposed / utilised to deliver the use case.



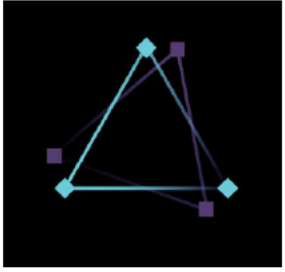
Reasoning or Knowledge Representation AI systems that store, structure, and process knowledge to make inferences, derive conclusions, or support decision-making.	☐ Knowledge Representation ☐ Automated Reasoning ☐ Commonsense Reasoning
Planning and Optimisation AI techniques that generate, refine, and optimise action sequences or resource allocation to achieve specific goals efficiently.	☐ Planning and Scheduling ☐ Searching ☐ Optimisation
Learning and Adaptation AI systems that identify patterns, extract insights, and improve performance over time based on data.	☐ Machine Learning ☐ Deep Learning ☒ Generative AI
Communication and Natural Language Processing AI systems that process, interpret, and generate human language for interaction, comprehension, and automation.	☒ Natural Language Processing (NLP) ☒ Text Generation ☐ Text Mining ☐ Machine Translation
Perception through the Senses AI systems that process and interpret sensory data, such as visual, auditory, or tactile inputs, to understand and respond to their environment.	☐ Computer Vision ☐ Audio Processing
Integration and Interaction with the Environment AI systems that interact with physical or digital environments, including autonomous agents, robotics, and interconnected systems.	☐ Multi-agent Systems ☐ Robotics and Automation ☐ Connected and Automated Vehicles (CAVs)
AI as a Service AI capabilities delivered through cloud-based platforms, offering tools, models, and infrastructure for AI-powered applications.	☒ AI Services (e.g., cognitive computing, machine learning frameworks, bots) ☐ Infrastructure as a Service (IaaS) ☐ Platform as a Service (PaaS) ☐ Software as a Service (SaaS)
Additional Comments or Explanation:	If you have selected any of the subcategories above, feel free to provide more detailed



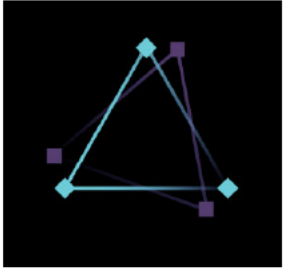
	comments or a description of how these elements apply to your specific use case.

Technical Elements

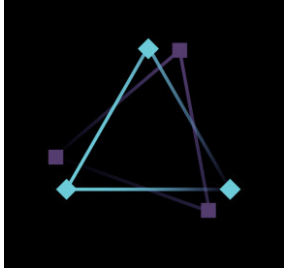
Platform implementation	• The Interactive Learning Environment is hosted on Azure, leveraging various Azure resources such as Container Apps, Storage Accounts, Keyvaults, and FrontDoor. • The deployment is managed using Azure Developer command-line with Bicep templates, ensuring a streamlined setup process. • The application is deployed in both production and non-production environments, providing a robust infrastructure for development and testing. • From an end-user perspective, the application is deployed behind Azure Front Door, which routes user traffic to the Azure App Container where the application is hosted. This setup ensures high availability and scalability, allowing the application to handle many user requests efficiently. • Security considerations include data encryption, secure authentication using Entra ID, and regular security audits. The cost model follows a freemium approach, offering basic features for free while providing premium features through subscription plans. • Source code for LibreChat is available on GitHub.
Model / Algorithm used	The Interactive Learning Environment utilises various AI models and machine learning algorithms, including large language models like OpenAI's GPT-4, Anthropic's Claude, and Google's Gemini for natural language



	understanding and generation, machine learning algorithms for text classification, sentiment analysis, and entity recognition, and deep learning techniques. The design allows for flexibility in the backend, enabling the use of different models that can be included as needed, ensuring easy updates and customisation to meet specific requirements or leverage advancements in AI technology for the training environment.	
Data Sources Select the types of data sources used and provide relevant details.	☐ Internal ☒ Public	☐ Third-party ☐ Synthetic
	Details: The Interactive Learning Environment is designed to allow users to use a diverse range of data sources. However, at this stage, only public information is permitted. Users can upload and analyse documents and images with models like Claude 3, GPT-4, and Gemini.	
Risk Assessment and Mitigation Details	To mitigate risks, the Interactive Learning Environment includes several measures designed to ensure smooth and secure operation: • Performance Tracing and Monitoring: Implemented using Azure Application Insights, providing valuable insights into the application's performance and helping identify and resolve issues quickly. • Authentication: Using Entra ID ensures secure access to the application, preventing unauthorised access. • Data Usage: Only publicly accessible information should be used in this system, minimising information security risks. • Conversation Recording: All conversations are recorded and can be accessed by administrators if an investigation is required.	



Security and Compliance Frameworks Select the security and compliance frameworks and measures implemented. Provide details or additional artifacts if relevant.	☐ Authority to Operate (ATO) ☐ System Security Plan (SSP) ☐ Security Risk Management Plan (SRMP)	☐ Information Security Registered Assessors Program (IRAP) ☐ Penetration Testing
	Details: No Security and Compliance Frameworks have been implemented at this stage.	
Assurance and Government Frameworks	Australia's AI Ethics Principles have been considered and applied during planning, however, no formal assessment against the AI Assurance framework has been undertaken at this time as this is not mandatory for low-risk use-cases.	
Record maintenance	Documentation is maintained for model choices, training materials, and testing results. The platform also supports the exporting of conversations, allowing users to maintain comprehensive records of their interactions, and review by administrators.	
Disengagement	Models can be disconnected by admin.	
Performance Metrics and Results	To monitor and evaluate the benefits of the AI solution, we are investigating the use of the following performance indicators and metrics: • **Usage Statistics:** Number of users and frequency of use, tracked through Google Analytics. • **Returning Users:** Number of returning users, also tracked via Google Analytics. • **Model Usage:** Includes model usage stats, messages per model, and cost per model. • **Training Completion Rates:** Percentage of users completing training courses, monitored using custom analytics triggers. • **User Feedback:** Collected through Microsoft Forms, this includes: o Baseline and Exit Surveys	



	○ Confidence Ratings before and after training. ○ Familiarity with AI Tools ○ Suggestions for Improvements ○ Positive Learner Feedback Score ○ Course Satisfaction Rating