

AI Acknowledgment – BirdTag Project (GROUP 178)

This document outlines the ethical and responsible use of Artificial Intelligence (AI) tools and services in the development of the BirdTag Serverless Media Storage and Tagging System, created as part of the FIT5225 Cloud Computing assignment at Monash University.

Our team used AI-powered tools (such as ChatGPT) to enhance productivity, problem-solving, and learning throughout the project. These tools supported us in the following ways:

1. Code Generation and Debugging

- AI was used to assist in writing boilerplate code, resolving syntax issues, and generating handler templates for AWS Lambda in Python.
 - Debugging guidance was sought during integration of AWS SDKs (Boto3), DynamoDB queries, and S3 interactions.
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2. Architectural Design Support

- We leveraged AI to explore architectural patterns suitable for event-driven and serverless design.
 - AI tools helped us reason through the use of services like DynamoDB Streams, SNS, and Cognito in a cost-effective and scalable manner.
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3. Machine Learning Integration

- While the actual model development and inference logic were implemented manually, we referred to AI tools for best practices in integrating YOLO and BirdNET with AWS Lambda and Docker images.
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4. Frontend Development Assistance

- ChatGPT was used to assist with React component logic, particularly around state management, conditional rendering, and API data handling.
 - TailwindCSS layout issues and responsive design adjustments were resolved with AI guidance.
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5. Documentation and Reporting

- AI assisted in drafting sections of the project's documentation, including the README.md, API descriptions, architecture explanations, and this acknowledgment.

6. Learning Aid

- For topics unfamiliar to team members (e.g., Cognito JWT flow, API Gateway authorizers, pre-signed URLs), AI was used as an educational assistant to quickly understand core concepts.

Limitations and Human Oversight

- AI tools were not used to generate final deliverables or replace the responsibility of implementation and validation.
 - All code, design, and decisions were reviewed, validated, and tested by the team.
 - No confidential or private data was shared with AI tools during this project.
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Conclusion

AI tools served as accelerators for learning, debugging, and productivity, but the core technical implementation, architecture, design, and integration were carried out by the BirdTag team members. We affirm that the usage of AI was within the guidelines of academic integrity and ethical responsibility.

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