



Module 8

Kickoff Workshop



Icebreaker

Data Privacy Scenarios!

Which of these actions would help protect data privacy?

- Encrypt sensitive data
- Share data without permission
- Anonymise personal details
- Expose data publicly



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Agenda

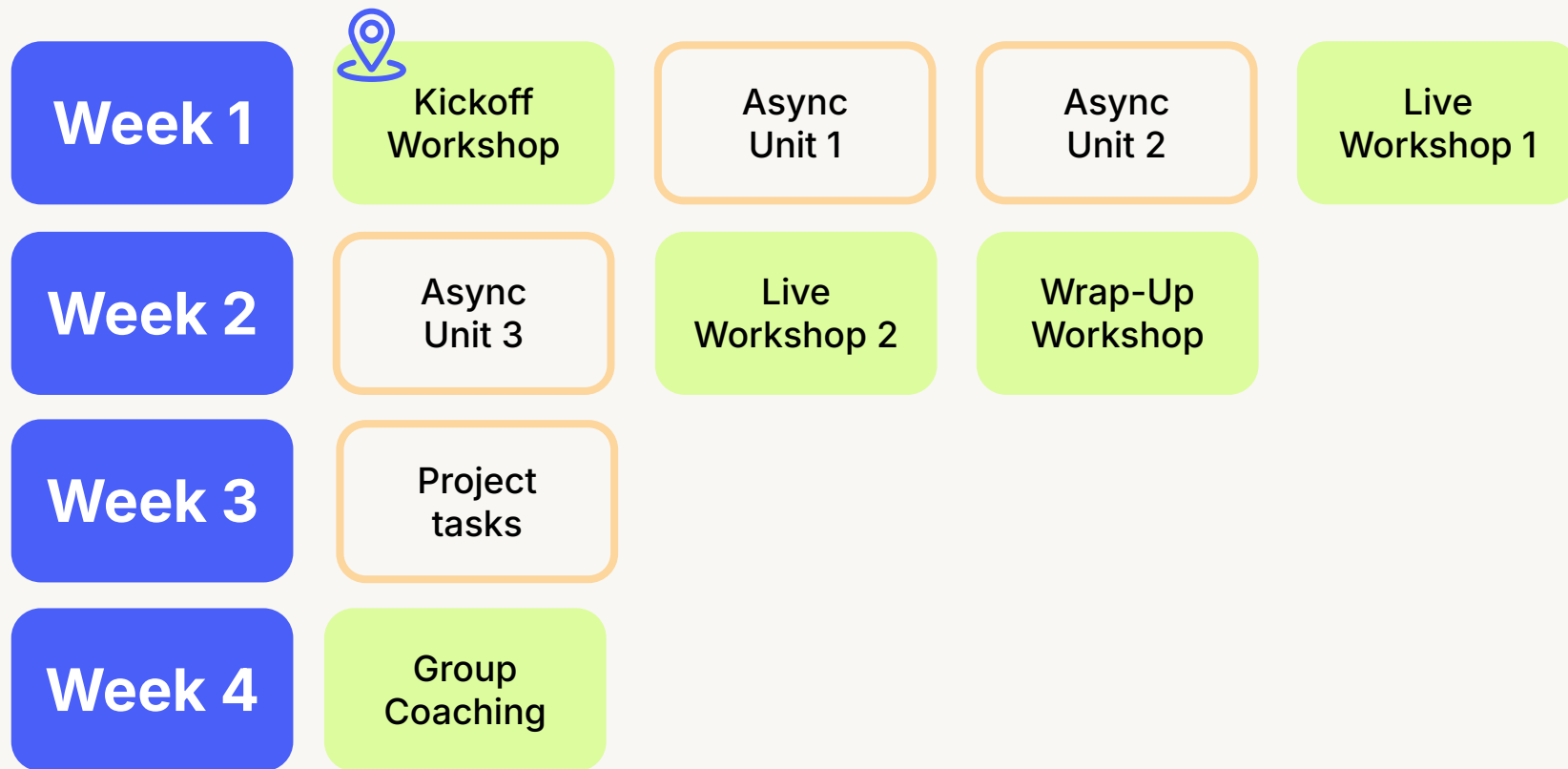
- **Welcome and introduction**
- **Module overview**
- **Applying module skills**
- **Project overview**
- **Q&A**
- **Next steps**



Module overview



Your learning journey



Module skills: from learning to applying

Select and implement appropriate performance metrics for different types of ML models



Choosing the right metrics for evaluating models based on their specific task and goals to ensure alignment with business needs and performance expectations.

Optimise model performance based on evaluation results and business requirements



Using performance insights to adjust models and improve outcomes, ensuring that they meet business goals, such as increased accuracy or reduced processing time.

Analyse the trade-offs between model complexity and performance using bias-variance concepts



Balancing model complexity to avoid overfitting or underfitting, ensuring that the model delivers the best possible performance while remaining scalable and interpretable for real-world applications.



Skill 1 in the real-world

Select and implement appropriate performance metrics for different types of ML models.



In 2021, Spotify used precision and recall to evaluate its recommendation models, ensuring suggested songs matched listener preferences while reducing irrelevant recommendations.



This improved user engagement and listening time, contributing to increased user retention and better ad targeting.



By aligning metric selection with evolving user behavior, Spotify can continually refine its models for niche audiences, further personalising experiences and boosting satisfaction.





Applying module skills to your workplace

Skills application brainstorm

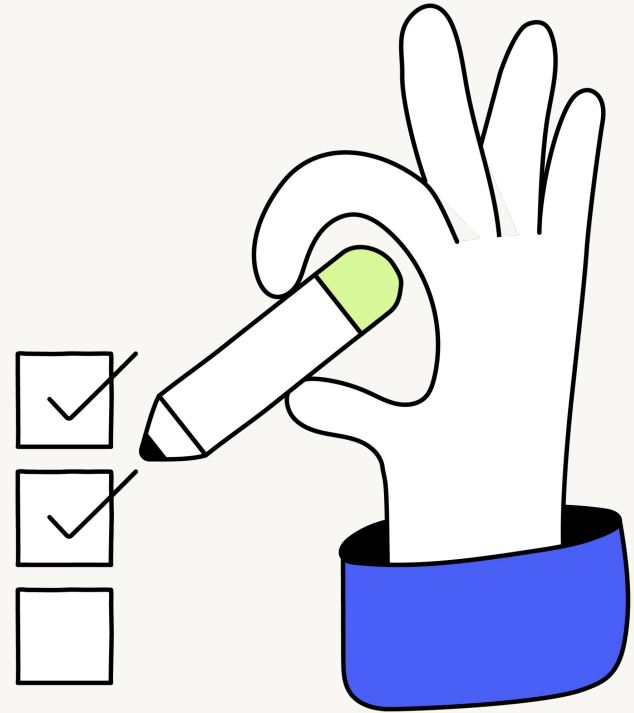
Choose a module skill and think of 3 ways to apply it in your role



Create a post for the group explaining how you'd like to apply this skill this month



Post your explanation in the Skill Application Brainstorm discussion board





Skill application share out

- 1 Review other discussion posts.
- 2 Choose another person's post that you think is a great example of applying the skill.
- 3 Raise your hand to share your thoughts.





Project overview

Phase 2 project: Applying ML techniques

Project objective: Build and refine an ML model for performance, fairness, and security. Use XAI to address bias, define key metrics, and ensure full compliance with robust documentation and retraining plans.

**Module 6
milestone:**
Model
Engineering

**Module 7
milestone:**
Optimising
Models

**Module 8
milestone:**
Model Evaluation

**Module 9
milestone:**
Data Security,
Privacy, and
Governance

We are here!

Module 8 milestone: Model evaluation

Phase project objective: Build and refine an ML model for performance, fairness, and security. Use XAI to address bias, define key metrics, and ensure full compliance with robust documentation and retraining plans.

Milestone task 1



Performance metric selection and implementation: Define and implement appropriate performance metrics based on the business problem and model type.

Milestone task 2



Performance optimisation and model refinement: Analyse model performance results and refine the model to improve efficiency, accuracy, and reliability.

Milestone task 3



Bias-variance tradeoff analysis: Evaluate the balance between model complexity and generalisability by analysing the bias-variance tradeoff.

Module 8 milestone: KSB requirements

Phase project objective: Build and refine an ML model for performance, fairness, and security. Use XAI to address bias, define key metrics, and ensure full compliance with robust documentation and retraining plans.

Task 1 KSBs



Performance metric selection and implementation: None

Task 2 KSBs



Performance optimisation and model refinement: None

Task 3 KSBs



Bias-variance tradeoff analysis: None



Questions?



Closing out

- **Action items:** Async Unit 1
- **Have questions?**
 - Chat with Atlas
 - Reach out to your Cohort Coach
 - Sign up for Tutoring
- **Log your OTJ hours**
- **Take the Workshop Survey** on My Multiverse

multiverse