



Module 7

Wrap-up Workshop



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Agenda

- **Key takeaways**
- **Finding opportunities and generating impact**
- **Project check-in**
- **Q&A**
- **Wrapping up and next steps**
- **Module 8 preview: Optimising Models**



Module 7

key takeaways



Key takeaways

1

Optimisation for Efficiency & Accuracy: Applying core training techniques and advanced algorithms is not just about building models—it's essential for achieving faster, more accurate results and ensuring they generalise effectively.

2

Advanced Strategies for Maximum Impact: Beyond foundational training, mastering hyperparameter tuning, ensemble learning, and model calibration is not just about better performance—it's essential for maximising robustness, reliability, and the overall value derived from ML solutions.

3

Data Handling for Ethical Outcomes: Designing robust data splitting, managing imbalanced datasets, and ensuring data quality is not just about technical correctness—it's essential for preventing bias, fostering trust, and delivering ethical and reliable ML deployments.



What key takeaway do you think will have the biggest impact on your work?



Applying key takeaways

- 1 Implement advanced training techniques to refine existing models, making them faster and more precise to meet specific operational demands.
- 2 Utilise hyperparameter tuning and ensemble methods to elevate model robustness and deliver consistently reliable, high-value predictions.
- 3 Apply robust data management practices to ensure fairness, prevent bias, and build trust in all machine learning applications.



Share your plan to apply Module 7 skills

Go to My Multiverse, Module 7
Wrap-up Workshop



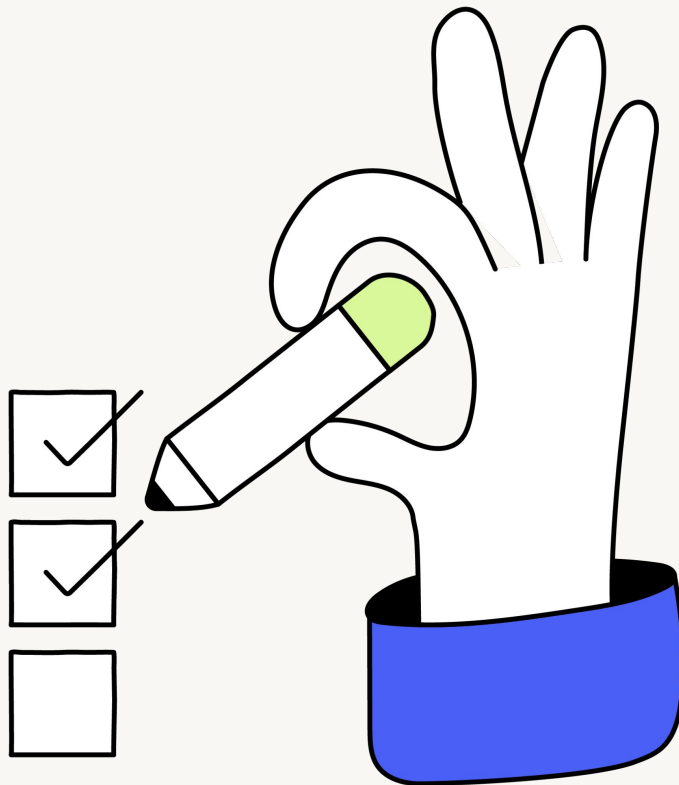
On page "Applying your skills", find the
discussion activity



Take 5 minutes to share how you will
apply this skill in your role



Take time this week to read what
others have written and get new ideas!





Phase 2 project

Module 6 +7 milestone

Access phase 2 project milestone

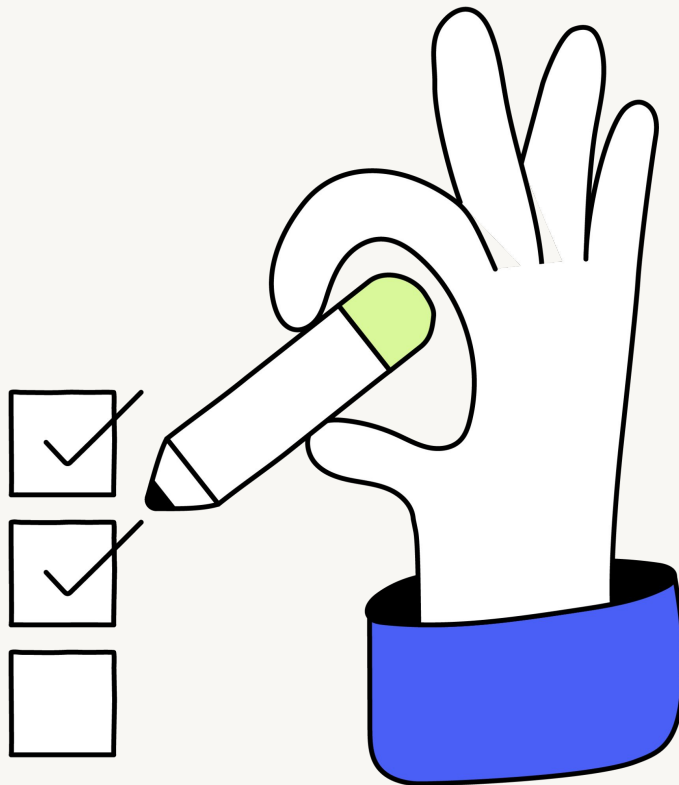
Go to My Multiverse, Projects



Find "AIMLF Phase 2 Project: Milestone 6"



Review milestone tasks





Module 6+7 milestone: Model engineering and training

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



Model development and training fundamentals: Build and train an initial version of the ML model using the refined dataset from Phase 1. Experiment with different algorithms and hyperparameters to determine the most effective approach.

Milestone task 2



Training process optimisation: Optimise the training process by systematically tuning hyperparameters, adjusting dataset sampling techniques (e.g., oversampling, undersampling, stratified sampling), and experimenting with advanced training techniques (e.g., transfer learning, ensemble methods, if relevant to your chosen algorithm and problem).

Milestone task 3



Identifying sources of bias and mitigation: Evaluate the model for algorithmic bias by analysing dataset imbalances, prediction disparities across different subgroups (if relevant to your data and problem), and relevant fairness metrics (e.g., demographic parity, equalised odds).

Module 6 +7 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 7 KSBs



Model development and training fundamentals: K19, S12

Task 7 KSBs



Training process optimisation: K19, S12, B5

Task 8 KSBs



Identifying sources of bias and mitigation: B5, K20

Module 6 +7 milestone tips for success

1 Make it reproducible, not just repeatable.

2 Test smart, not just often.

3 Don't just fix bias—prove it.





Questions?



Wrapping up

Action items

- Attend Group Coaching session
- Complete your project milestone
- Share your project progress with your manager
- **Take the Module Survey** on My Multiverse



Next steps

Action items

- **Have questions?**
 - Chat with Atlas
 - Reach out to your Cohort Coach
 - Sign up for Tutoring
- **Log your OTJ hours**
- **Take the Module Survey** on My Multiverse



Looking ahead

Module 8: Data Security, Privacy, and Governance

multiverse