

# Performance Benchmarks for Qiskit Machine Learning - Final Showcase

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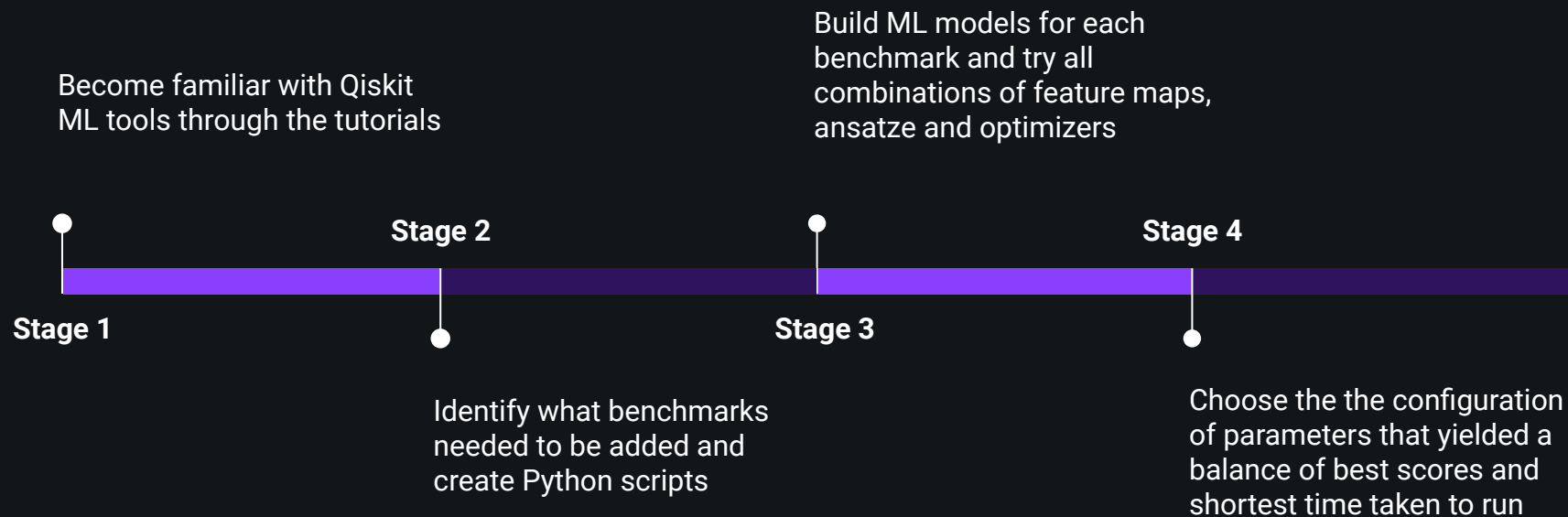
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# Background

- Qiskit Machine Learning was lacking in performance benchmarks
- Performance benchmarks measure the metrics such as memory consumption, time taken for execution and score of a ML model over the lifetime of a project
- Important to track benchmarks to ensure functionality improves over time

# Journey



# Problems Encountered

- Took too long to run benchmarks
- Solution: cache the weights of the trained model

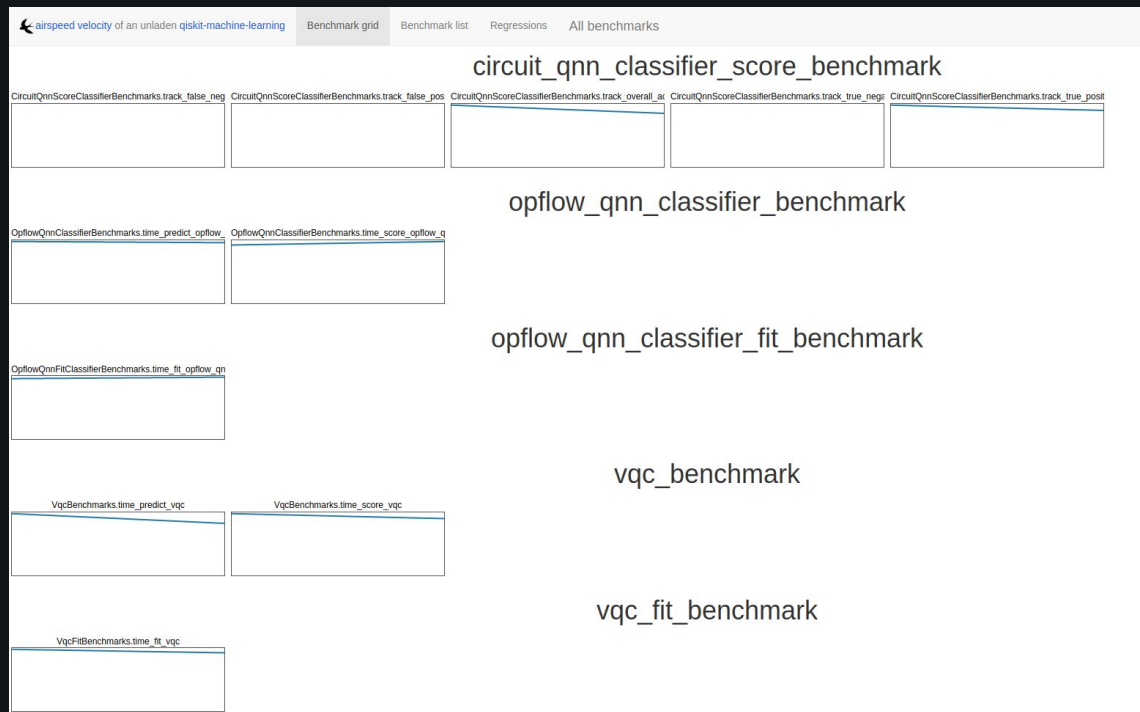
# What we achieved

## Classification

- New iris dataset
- Score benchmarks for VQC, TwoLayerQNN and CircuitQNN

## Regression

- New Combined Cycle Power Plant (CCPP) dataset
- VQR training and score benchmarks
- TwoLayerQNN training and score benchmarks



# Plans for the future

- ML classification benchmarks PR review and merge [#27](#)
- ML regression benchmarks PR review and merge [#28](#)
- Quantum kernel benchmarks

# Any Questions?

Thank you Anton for being a great mentor!  
and thank you to Qiskit for this amazing opportunity 🧊