Quantum Machine Learning Data Check: Is a quantum experiment on this table worth setting up?

17 November 2026. Table: example_two_class_table.csv. The table has 260 rows and 3 numeric feature columns, with 47 % in the smaller class. After the standard preparation a quantum model would need 3 qubits, which fits the simulator.

In short: on this table a simple classical model does as well as a nonlinear classical model; the check sees no reason to set up a quantum experiment.

This is a quick first look using classical models only. It is not a quantum run and no promise about one.

QML Suitability

Classical first (score band 0–40 out of 100)

Classical first	Open	Worth an experiment	Strong candidate
0–40	41–60	61–80	81–100

Your data carry a clear signal, and a simple classical model already does about as well as a nonlinear classical model. That is good news for a classical solution, and it saves you the cost of a quantum experiment on this table. A quantum model would need 3 qubits here, but the check finds no reason to expect it to add anything.

What decides it: a simple classical model reaches a macro F1 of 0.81 out of 1.00, and a nonlinear classical model adds little or nothing.

With a table this small the band can shift. Treat it as a first indication.

What speaks for this data

Signal: the best classical model reaches a macro F1 of 0.81, against 0.35 for a model that always predicts the larger class.

Good news for a classical solution: a simple classical model already reaches 0.81.

Size: the prepared table has 3 features and fits 3 qubits.

Balance: the larger class is 1.1 times the smaller one.

What speaks against it

No nonlinear structure found: a nonlinear classical model reaches 0.75, the best simple classical model 0.81.

Small table: 52 validation rows.

Scores are macro F1 on 52 validation rows of the table, one split; 1.00 is perfect. The band rests on a score that weighs these findings and further checks.

From the published records

On a real table of 17,157 rows (German power-price spikes) the classical models stayed ahead of the quantum model. Verdict: No advantage demonstrated (QL-EV-004). In a study on synthetic labels, the quantum kernel won no comparison where the structure was purely classical (QL-ST-003).

All records and studies, with their numbers: qubit-lab.ch/evidence

Beyond this table

• This result is about this one table. Another table can read differently, and the check can be repeated at any time.
• The RQP platform covers six further use cases, in optimisation and pricing, where the question is a different one. They are listed on the next page.

For this table the check points to a classical solution. If you want to talk it through: thirty minutes on another table, or on the use case your management asks about.

Book a 30-minute call: calendly.com/daniel-hug-qubit-lab/new-meeting · or write to daniel.hug@qubit-lab.ch

Run the check on a table of your own: qubit-lab.ch/data-check · Daniel Hug, founder: ETH physicist, MBA, formerly UBS, Credit Suisse, SIX.

qubit-lab.ch held the table in memory only for this check, in the Google Cloud region Zurich, and deleted it when the answer was returned; nothing was written to disk or kept. If the table was pasted or attached in a chat, it also passed through that AI assistant, whose data terms apply. Use public, synthetic or masked data for this check, never client data.

This page is a first indication from classical models. It is not a certificate, not a quantum result and no forecast of one. The pages that follow describe the RQP platform.

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Quantum Computing for Financial Services.
The RQP platform: vendor-neutral tests on your own problems and data.

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The seven RQPs

RQP	The bank's question	Quantum method	Measured against
QML Classification	Fraud detection, credit scoring and downgrade prediction on the bank's own tables	Variational classifier, quantum kernel machine	Best standard models on the same data split
Portfolio Optimization	Which assets to hold, given risk, return, budget and type constraints?	QAOA	Heuristic benchmark and certified optimum (exact classical solver)
Index Replication	Which few names track the index best?	QAOA	Heuristic benchmark and certified optimum
Credit Allocation	Which facilities to take in a book purchase or risk transfer, given correlated losses?	QAOA	Heuristic benchmark and certified optimum
Collateral Allocation	Which collateral to post against which obligation, trading cost against coverage under stress?	QAOA	Certified optimum
Feature Selection	Which columns should feed a model?	QAOA	Heuristic benchmark and certified optimum
Quantum Monte Carlo	Derivatives pricing, including correlated baskets	Amplitude estimation	Classical Monte Carlo, with the crossover point in samples

How a run works

1 Workbook in
The team describes the problem in an Excel workbook, or a CSV table for classification.

2 Two runs, one referee
The quantum algorithm and the classical references solve the same problem under the same constraints.

3 Full report out
A full report and a two-page overview, with verdict, gaps, confidence intervals and seeds.

What a quant can check

- **The reference is exact.** For the optimisation RQPs an exact solver proves the optimum, so a gap is a fact, not an estimate.
- **Reports show the working.** The full report lists the circuit, settings, seeds, confidence intervals and the gap to each reference; the overview carries the verdict and the key numbers.
- **Notebook downloads.** Each run exports a rerun notebook, which reproduces the result, and a retrain notebook, which trains the circuit again from the data. Both come for Qiskit, PennyLane, Cirq, CUDA-Q and Classiq, with the circuit also as OpenQASM.
- **Hardware runs.** Several RQPs also run on IBM hardware through the team's own IBM account, and the report shows the hardware result next to the simulator result.
- **Failures are published.** Runs where the quantum method loses appear in the evidence records next to the ones where it matches. Numbers and data: qubit-lab.ch/evidence

Your data. First tests run on synthetic or masked data, and the exported notebooks rerun in-house, so nothing confidential has to leave the bank. Workbooks need no client identifiers. Platform runs with an access key are processed in the Google Cloud region Zurich, and their run artifacts are deleted after 24 hours. NDA on request.

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Test before you invest

Every bank is asked what quantum computing will do for its business. Vendor claims do not answer that. Only a measured result on the bank's own problem does.

The RQP platform gives that answer. A team loads its own data, runs today's quantum algorithms on it, and gets a report that states plainly how the quantum result compares with the best classical one.

What the bank gets

A verdict per use case
Each run ends in a report with the verdict first: advantage, parity or no advantage, with the numbers behind it.

Reports for two audiences
Every run produces a two-page overview for management and a full report for specialists, both as PDF.

Runs on quantum hardware
Simulators, and for several RQPs IBM hardware on the team's own account: the bank sees what today's machines deliver.

Vendor-neutral, no lock-in
Every run exports as notebooks for five quantum frameworks and as OpenQASM, so the bank's quants can rerun and extend it in their own environment.

Results in hours
A run takes hours, a full use case a few weeks. Seven integrated, ready-to-use Rapid Quantum Prototypes (RQPs) cover machine learning, optimisation and pricing.

A repeatable benchmark
The same workbook can be rerun as hardware improves, so the bank sees when the answer changes.

Evidence, not promises. Every quantum result is benchmarked against a classical referee, a certified optimum wherever one can be computed. We claim no quantum advantage today. On real financial data the published results show parity at best, and the platform shows exactly where each method stands. The studies and run records are public, with all numbers and data: **qubit-lab.ch/evidence**

How to start

1 · First call and demo	Thirty minutes to pick the right start.
2 · Personal access	Guest access to the platform on a sample workbook, at your own pace.
3 · Check or Sprint	One use case tested by us in two weeks, or your team on three to four in eight or ten weeks. Fixed price.

For a team new to quantum. The Quantum Capability Kickstart, five hands-on half-days, opens a Quantum Sprint or can be booked on its own.

Interested in a live demo? Contact me.
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