



Al and Quantum

Al for quantum:

- 2024: IBM Quantum introduces **Qiskit Code Assistant**
- 2025: LLMs automate quantum feature maps design
- 2025: Using Shapley Values to explain quantum circuits, towards XQML
- <u>2025</u>: LLMs help eliminate Barren plateaus

Quantum for AI:

- 2024: Superposition helps model uncertainty/ambiguity in NLP
- 2022: Quantum motion segmentation on par with classical via QUBO



Summary thus far

- HHH
- QML
- VQC
- NN
- QNN
- QNNs
- EC
- HPC-QC
- \$\$\$
- QAI



Current state of things

Summaries of current QML in NISQ era (2024)

- <u>Short version, 43 pages</u> 2024

- <u>Long version, 88 pages</u> 2025

Recommended as "If you only read one thing after today about QML"

