

Quantum-Inspired Analysis for Detecting Financial Crime

Money Laundering is a rapidly growing crisis that traditional fraud systems fail to catch
Leighton Morris – Undergradauate Student | Jack Pelikan – Mentor

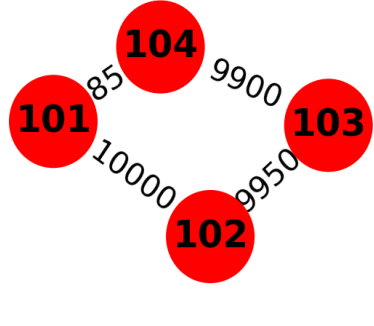
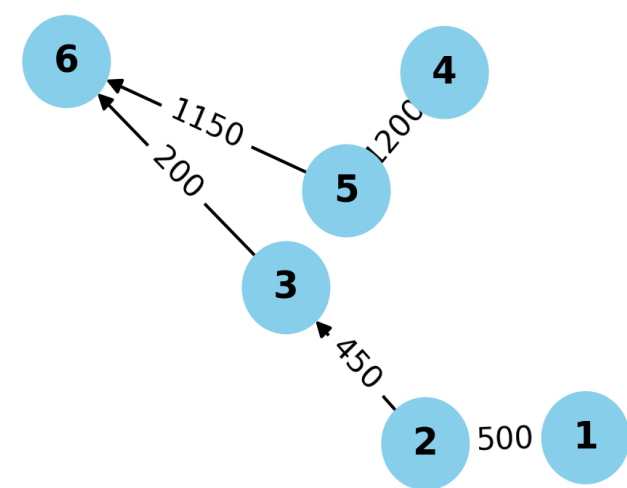


Quantum Innovation Center
University of Missouri

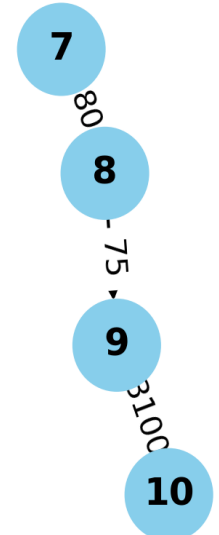
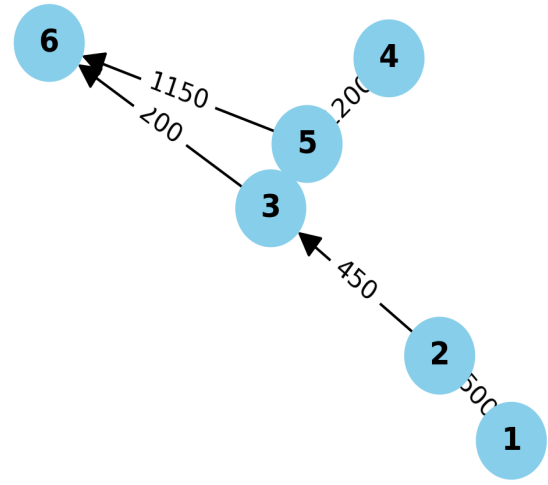


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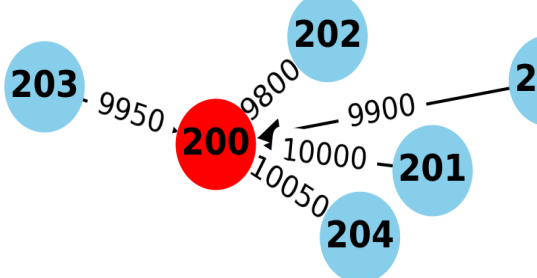
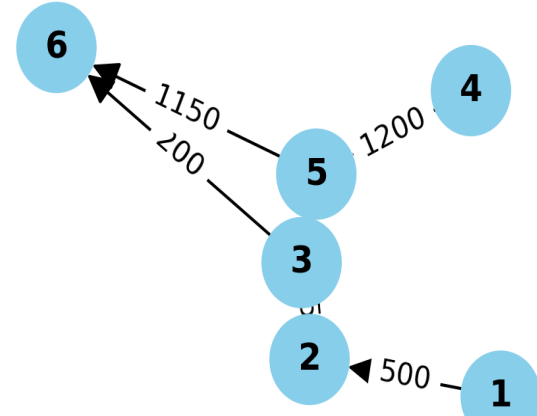
Classical Tests: Layering



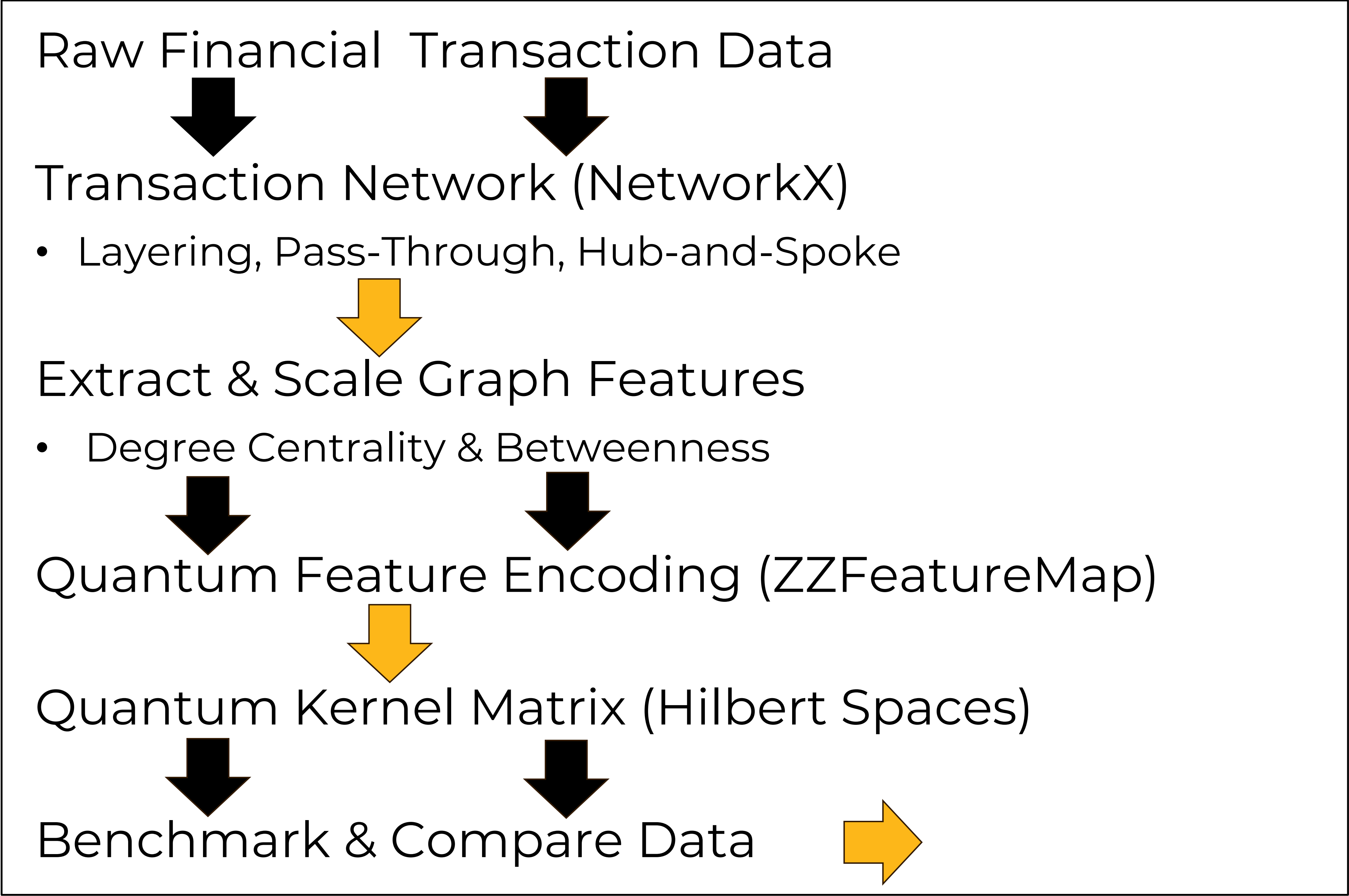
Pass-Through



Hub-and-Spoke



Workflow



Results

BENCHMARK COMPARISON RESULTS					
	Model	Accuracy	Precision	Recall	F1-Score
(s)	Classical SVM (RBF)	0.48	0.488571	0.48	0.413262
	Quantum SVM (QSVC)	0.52	0.523636	0.52	0.518462
		0.0010			5.7136

Execution Environment	Hardware / Backend	Overall Accuracy	Precision	Recall	F1-Score
Classical SVM	Local CPU (Scikit-Learn)	~50.00%	~48.80%	~50.00%	~49.39%
Quantum Simulator	Noiseless State Simulator	~55.00%	~52.30%	~55.00%	~53.62%
Real Quantum Hardware	Physical QPU (ibm_miami)	57.14%	32.65%	57.14%	41.56%

Quantum Kernel

