

BITE Brain Tumor Dataset	Name of Models/Techniques Names for Quantum Image Representation	Number of Qubits Required	Encoding Complexity (Number of Quantum Gates / Operations)	Quantum Circuit Depth	Encoding Time (Simulation Time)	Scalability (Image Size & Image Count)	Image Fidelity / Pixel Accuracy	Gate Count	Quantum Support	Accuracy	Flexibility	Deployability on Hardware	
												High	Low
1	FRQI Variants (Improved FRQI / EFRQI / IF-RQI)	Medium	High	High	High	Low	Medium	High	Limited	Medium	Low		Poor
2	NEQR Extensions (ENEQR / INEQR / Color NEQR)	High	Very High	Very High	Very High	Low	High	Very High	Moderate	High	Medium		Poor
3	DCT-EFRQI – Combines classical DCT transform with enhanced FRQI for compression.	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Moderate	Medium	Medium		Moderate
4	Tensor Network Representation (TNR)	High	High	High	High	Low	High	High	Limited	High	Low		Poor
5	QPIE (Quantum Probability Image Encoding)	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Moderate	Medium	Medium		Moderate
7	GQIR – Generalized Quantum Image Representation	high	Very High	Very High	Very High	Low	High	Very High	Moderate	High	Medium		Poor
8	MCQI – Multi-Channel Quantum Image Representation	very high	Very High	Very High	Very High	Very Low	High	Very High	Moderate	High	High		Not Feasible
9	QLR – Quantum Logic Representation	very high	High	High	High	Very Low	High	High	Limited	High	Low		Not Feasible
9	2D-QSNA – Two-Dimensional Quantum State with Normalized Amplitudes	low	Low	Low	Low	High	Medium	Low	Limited	Medium	Low		Good
10	NASS – Novel Arbitrary Superposition State	low	Medium	Medium	Medium	High	Medium	Medium	Limited	Medium	Low		Good
11	Our Proposed Method for Quantum Image Representation	low	Low	Low	Low	High	High	Low	Full	High	High		Good

Synthetic Aperture Radar – Earth Observation	Name of Models/Techniques Names for Quantum Image Representation	Number of Qubits Required	Encoding Complexity (Number of Quantum Gates / Operations )	Quantum Circuit Depth	Encoding Time (Simulation Time)	Scalability (Image Size & Image Count)	Image Fidelity / Pixel Accuracy	Gate Count	Quantum Support	Accuracy	Flexibility	Deployability on Hardware
1	FRQI Variants (Improved FRQI / EFRQI / IF-RQI)	Medium	High	High	High	Low	Low	High	Limited	Low	Low	Poor
2	NEQR Extensions (ENEQR / INEQR / Color NEQR)	High	Very High	Very High	Very High	Low	Medium	Very High	Moderate	Medium	Medium	Poor
3	DCT-EFRQI – Combines classical DCT transform with enhanced FRQI for compression.	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Moderate	Medium	Medium	Moderate
4	Tensor Network Representation (TNR)	High	High	High	High	Low	Medium	High	Limited	Medium	Low	Poor
5	QPIE (Quantum Probability Image Encoding)	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Moderate	Medium	Medium	Moderate
7	GQIR – Generalized Quantum Image Representation	High	Very High	Very High	Very High	Low	Medium	Very High	Moderate	Medium	Medium	Poor
8	MCQI – Multi-Channel Quantum Image Representation	Very High	Very High	Very High	Very High	Very Low	Medium	Very High	Moderate	Medium	High	Not Feasible
9	QLR – Quantum Logic Representation	Very High	High	High	High	Very Low	Medium	High	Limited	Medium	Low	Not Feasible
9	2D-QSNA – Two-Dimensional Quantum State with Normalized Amplitudes	Low	Low	Low	Low	High	Low	Low	Limited	Low	Low	Good
10	NASS – Novel Arbitrary Superposition State	Low	Medium	Medium	Medium	High	Low	Medium	Limited	Low	Low	Good
11	Our Proposed Method for Quantum Image Representation	Low	Low	Low	Low	High	Medium	Low	Full	Medium	High	Good

Labelbox Natural Image Dataset	Name of Models/Tехнiques Names for Quantum Image Representation	Number of Qubits Required	Encoding Complexity (Number of Quantum Gates / Operations)	Quantum Circuit Depth	Encoding Time (Simulation Time)	Scalability (Image Size & Image Count)	Image Fidelity / Pixel Accuracy					Deployability on Hardware
1	FRQI Variants (Improved FRQI / EFROI / IF-RQI)	Medium	High	High	High	Low	Medium	High	Limited	Medium	Low	Poor
2	NEQR Extensions (ENEQR / INEQR / Color NEQR)	High	Very High	Very High	Very High	Low	High	Very High	Moderate	High	Medium	Poor
3	DCT-EFROI – Combines classical DCT transform with enhanced FRQI for compression.	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Moderate	Medium	Medium	Moderate
4	Tensor Network Representation (TNR)	High	High	High	High	Low	High	High	Limited	High	Low	Poor
5	QPIE (Quantum Probability Image Encoding)	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Moderate	Medium	Medium	Moderate
7	GQIR – Generalized Quantum Image Representation	High	Very High	Very High	Very High	Low	High	Very High	Moderate	High	Medium	Poor
8	MCQI – Multi-Channel Quantum Image Representation	Very High	Very High	Very High	Very High	Very Low	High	Very High	Moderate	High	High	Not Feasible
9	QLR – Quantum Logic Representation	Very High	High	High	High	Very Low	High	High	Limited	High	Low	Not Feasible
9	2D-QSNA – Two-Dimensional Quantum State with Normalized Amplitudes	Low	Low	Low	Low	High	Medium	Low	Limited	Medium	Low	Good
10	NASS – Novel Arbitrary Superposition State	Low	Medium	Medium	Medium	High	Medium	Medium	Limited	Medium	Low	Good
11	Our Proposed Method for Quantum Image Representation	Low	Low	Low	Low	High	High	Low	Full	High	High	Good