# Exploring spin qubit simulations and experiments with artificial intelligence

The research Lab of Prof. Anasua Chatterjee focuses on the development and optimization of spin qubits in semiconductor materials for scalable quantum computing. By combining experiments, with theory models and machine learning, one research direction explores automated tuning, high-fidelity qubit control, and real-time feedback. Our goal is advance quantum technologies, paving the way for large-scale, fault-tolerant quantum processors.

AI and spin qubits
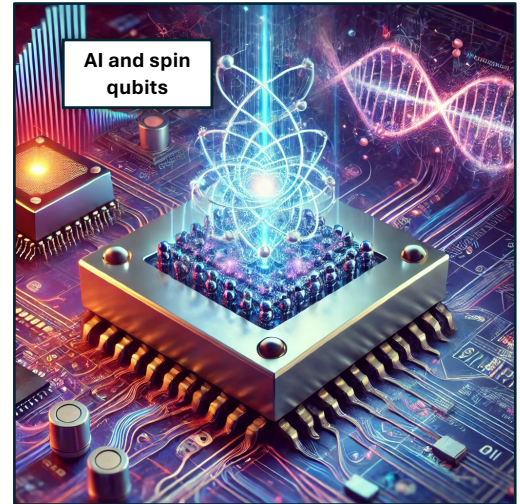
Possible (Bachelor) thesis projects:

- Modeling spin qubit experiments & combining the models with experiments via AI

- Predicting qubit dynamics: time-series learning with RNNs & Transformer

QuTech
Creating the quantum future

Interested? Contact us:

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