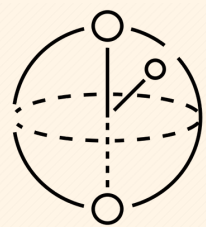# Machine Learning to Quantum Machine Learning for Critical Applications

Project Outline

Name: Luke Power

Course: BSc Data Science and Analytics

Student No. 120371316

Supervisor: Krishnendu Guha

Objective	Success Metrics
The ML to QML for Critical Applications project aims to explore the potential benefits of quantum machine learning. The project involves an in-depth study of quantum computing. I will also be utilizing the IBM Qiskit platform, which allows for access to quantum computing infrastructure. I will do a comparative analysis between classical machine learning and quantum machine learning on a data set to uncover what insights can be discovered via quantum machine learning over classical machine learning in addressing real-world problems.	Understanding of Quantum Computing and QML
	Implementing QML on a dataset and discovering insights beyond the scope of Classical ML
	Create a user-friendly website to showcase findings.

Tasks
Complete IBM's Quantum Machine Learning	2021 Qiskit Global Summer School
Become familiar and comfortable using Qiskit for QML
Investigate and find a suitable dataset to implement QML
Learn Web Development for final website

Initial Resources:

- ***Quantum Machine Learning with Python*** Santanu Pattanayak
- Kaggle.com
- Quantum Machine Learning | 2021 Qiskit Global Summer School