

Jake Xuereb



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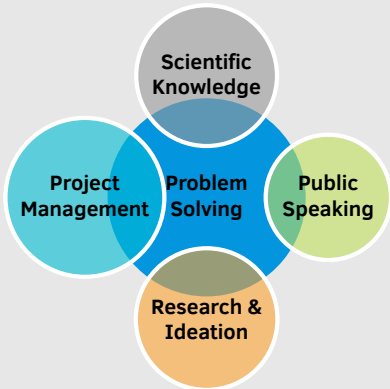
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jqed-xuereb

Skills

Overview



Quantum Computing Frameworks & Programming Languages

0 LOC 5000 LOC

LaTeX • Python • QISKIT • QASM

CIRQ

C++ • HTML5 • CSS • Project Q • Q#

Education

2017 - 2021 **BSc. Mathematics & Physics**

University of Malta

Year IV.

Expected classification: *Second Upper* - Magna Cum Laude.

2015 - 2017 **MATSEC Certificate**

De La Salle College Sixth Form

Attained A-Levels in Mathematics, Physics & Chemistry with Intermediates in English & Philosophy.

Projects

Ongoing **Thesis Project - Thermodynamics of a Single Qubit**

Uni of Malta Supervised by Elisa Bäumer & Prof. André Xuereb.

Pursuing an idea I proposed with Elisa Bäumer. We are seeking to examine the thermodynamics of the DQC1 circuit by making use of results achieved in recent years relating multipartite entanglement and thermodynamics on a quantum level.

Sept 2019 **The forced Quantum Rendezvous Problem**

IBM - QISKIT

Hackathon

Repository: <https://tinyurl.com/y2brttzy>

I was invited by IBM to participate in a hackathon using their quantum computing python framework. Having pitched the idea to take a quantum approach to the Rendezvous problem from combinatorics, I led a team, supervised by Almudena Carrera Vazquez, to develop an algorithm for this purpose.

2017 - **LearnD**

Take Off & Konnekt

Year 1: Developed idea to improve private education in Malta and create a culture of student - student tuition, winning the 2018 Take Off Seed fund award with this pitch.

Year 2: Developed the branding and prototype for this idea selling a majority position in the app to a VC (Konnekt).

Year 3: Led project with a marketing and development team of 10 people and \approx €50,000 in funding to successfully launch www.learnnd.com

Talks & Conferences

- 21/3/20 - Gave talk entitled "*Tensor Networks - Visual Proofs and some Quantum Mechanics*" - MMS Meeting - Notes.
- 9/10/19 - Gave a short talk entitled "*What do pentagons and baryons have in common?*" about Euler characteristics of pentagons and Tian-Yau Manifolds. - MMS Meeting - Slides.
- 24/9/19 - Guest lecture given as part of *EBI3085* at the University of Malta on Entrepreneurship.
- 12/9/19 - 14/9/19 Attended QISKIT Camp 2019 at Schilthorn and formed part of Team Quantum Rendezvous. Presented results on behalf of Team. - Slides
- 9/9/19 - 12/9/19 - Attended *Quantum Information for Developers 2019* a quantum computing summer school held at and organised by ETH Zürich.
- 12/4/19 - Delivered talk at the 2019 *S³ Annual Science Conference* entitled "*Can stitching up Spacetime differently give different Quantum Mechanics*".
- 12/10/18 - People's Choice Award winning pitch delivered on behalf of LearnD at the Malta Innovation Summit.
- Attended *Quantum Information for Developers 2018* a quantum computing summer school and hackathon held at and organised by ETH Zürich from the 11th to the 14th of September.