



MICRO-SCHOOL

NITheCS

National Institute for
Theoretical and Computational Sciences

Ship Your Code with Docker

Dean Brand (Stellenbosch University)

Fri, 19 September 2025 | 12h00-12h30 SAST

Attend online

ABSTRACT

During this micro-school we will explore Docker, the industry-standard platform for packaging applications into lightweight, portable containers. Docker lets you ship code and all its dependencies together, ensuring it runs identically on any laptop, server, or cloud. I will introduce Docker's core building blocks: images, containers, Dockerfiles, and registries; and demonstrate, live, how to containerise a simple Python script from scratch. You'll install Docker Desktop, build your first image, run it, and learn best practices for sharing and cleaning up containers. By the end of this fast-paced session you'll be ready to add Docker to your workflow and say goodbye to "it works on my machine."

BIOGRAPHY



Dean is a third-year PhD student in the Quantum Research Group of Stellenbosch University, under the supervision of Prof Francesco Petruccione. His research focuses on the intersection of quantum computing and neuromorphic computing, to find groundbreaking hybridisation of these technologies. Dean completed his BSc and BSc Honours at the University of the Witwatersrand, majoring in astronomy, astrophysics, and theoretical physics. After this he completed his MSc with Prof Petruccione and Prof Ilya Sinayskiy (University of KwaZulu-Natal), which was based on an application of Open Quantum Systems techniques to model quantum phenomena in IBM quantum computers. His research interests have since evolved to include machine learning and quantum algorithms, which are central to the idea and aims of quantum neuromorphic computing, especially for applications such as artificial intelligence and deep learning.

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