

GUIDock Using Docker containers with a common graphics user interface to address the reproducibility of research

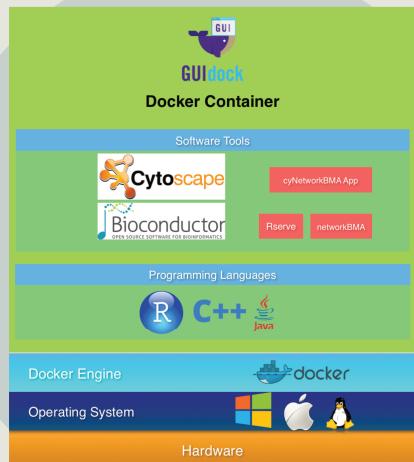
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Reproducibility is vital in science. For complex computational methods, it is often necessary, not just to recreate the code, but also the software and hardware environment to reproduce results. Virtual machines, and container software such as Docker, make it possible to reproduce the exact environment regardless of the underlying hardware and operating system.

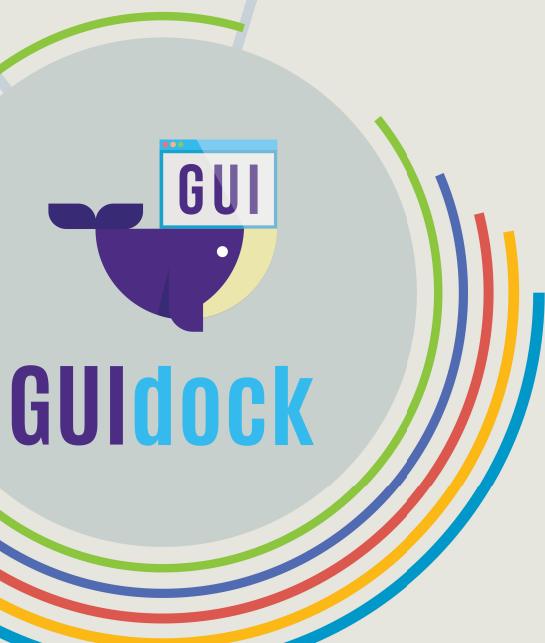
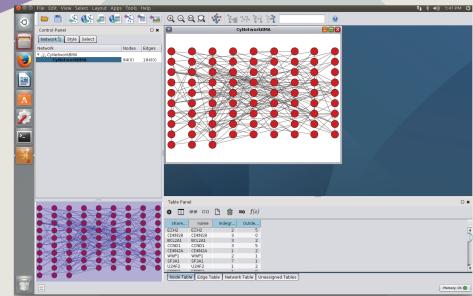
However, workflows that use Graphical User Interfaces (GUIs) remain difficult to replicate on different host systems as there is no high level graphical software layer common to all platforms.



GUIDock uses Docker, an open source project that provides a container with only the absolutely necessary software dependencies and configures a common X Windows (X11) graphic interface on Linux, Macintosh and Windows platform.



CyNetworkBMA is network inference application that uses Cytoscape to display the networks. Using GUIDock, our app produces identical graphics on Linux, Mac and Windows systems.



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