

1. Prepare the state $|\Psi(\vec{\theta})\rangle$ or $\rho(\vec{\theta})$ on the quantum computer, where $\vec{\theta}$ can be any adjustable experimental or gate parameter.
2. Measure the expectation value $\langle H \rangle (\vec{\theta})$
3. Use a classical non-linear optimizer such as the Nelder-Mead simplex method to determine new values of $\vec{\theta}$ that decrease $\langle H \rangle (\vec{\theta})$
4. Iterate this procedure until convergence in the value of the energy. The parameters $\vec{\theta}$ at convergence define the desired state.