

VISUALIZING GROVER'S SEARCH ALGORITHM

JAMES WEAVER & PAUL KASSEBAUM

1. HOW GROVER'S WORKS

If we want an operator U_x with the following behavior

$$(1) \quad \begin{aligned} U_x|x\rangle &= -|x\rangle \\ U_x|y\rangle &= |y\rangle \end{aligned}$$