

Quantum Art Generation for Educational Purposes

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Why Quantum Art?

Use of artistic languages like storytelling, art, and games cultivates interest in the general population

A fun, inviting entry point for people who want to learn but may be intimidated

Creative visualizations have value in educational contexts

This project: generating bubble art as a creative visualization of quantum noise

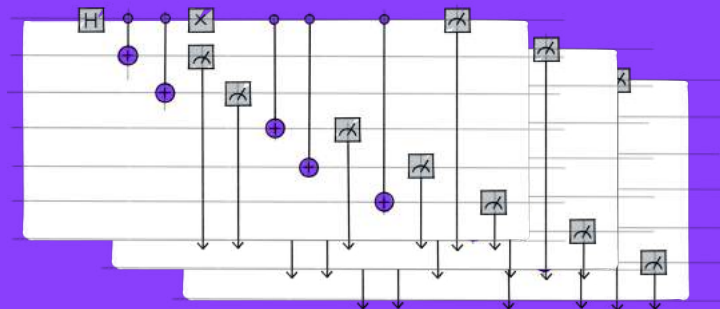
Pictured: “Live long and prosper” + noise



Visualization of Quantum Noise

Text input: "Live long and prosper"

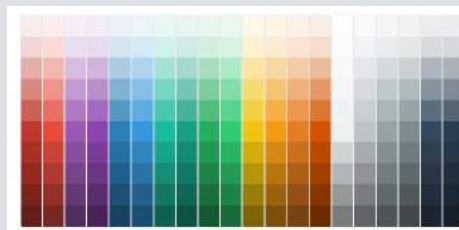
Text converted to bit string; chopped into smaller strings depending on no. of qubits



Bit strings encoded into a family of quantum circuits

Measurement outputs: bit strings + counts

Bit strings converted to color hex codes



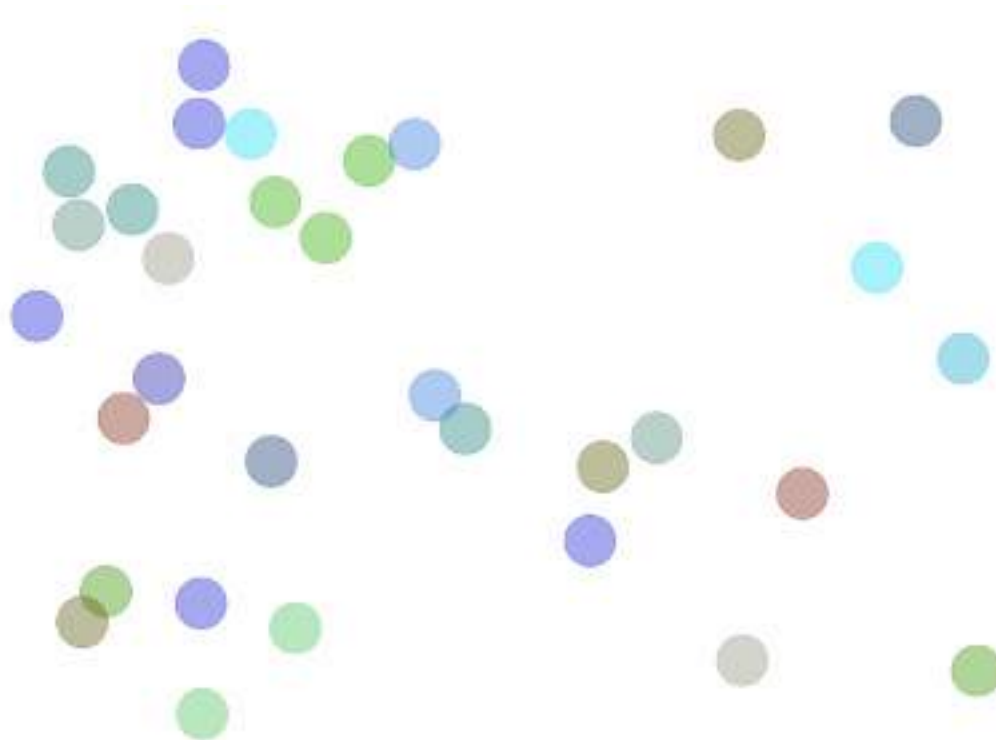
“Live Long and Prosper”

Ideal case: 32 bubbles of equal size

Number of bubbles = number of outputs

Bubble area proportional to
corresponding count

More bubbles as noise increases



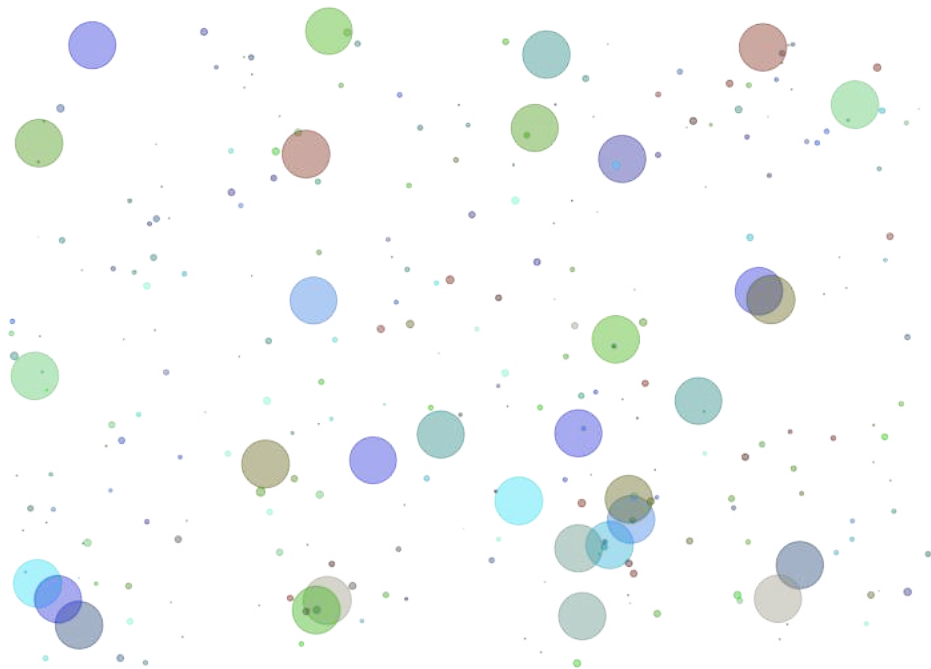
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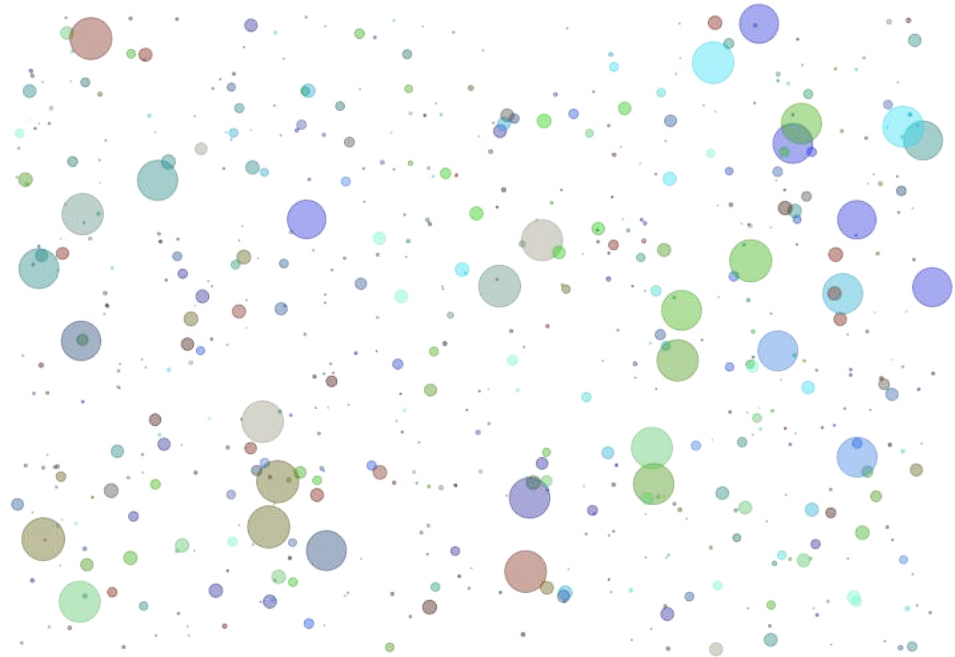
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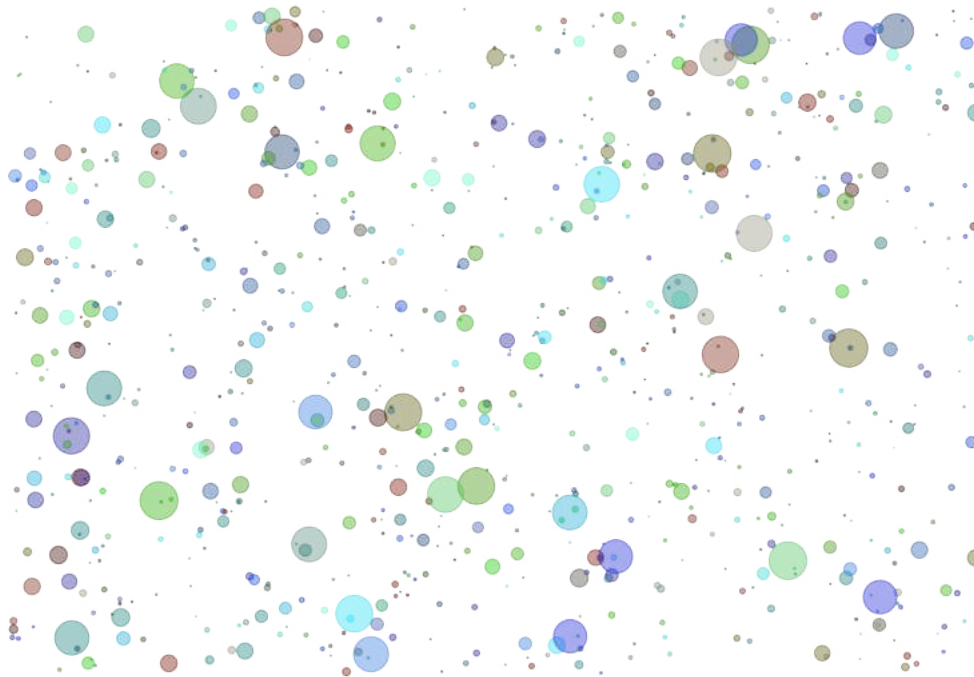
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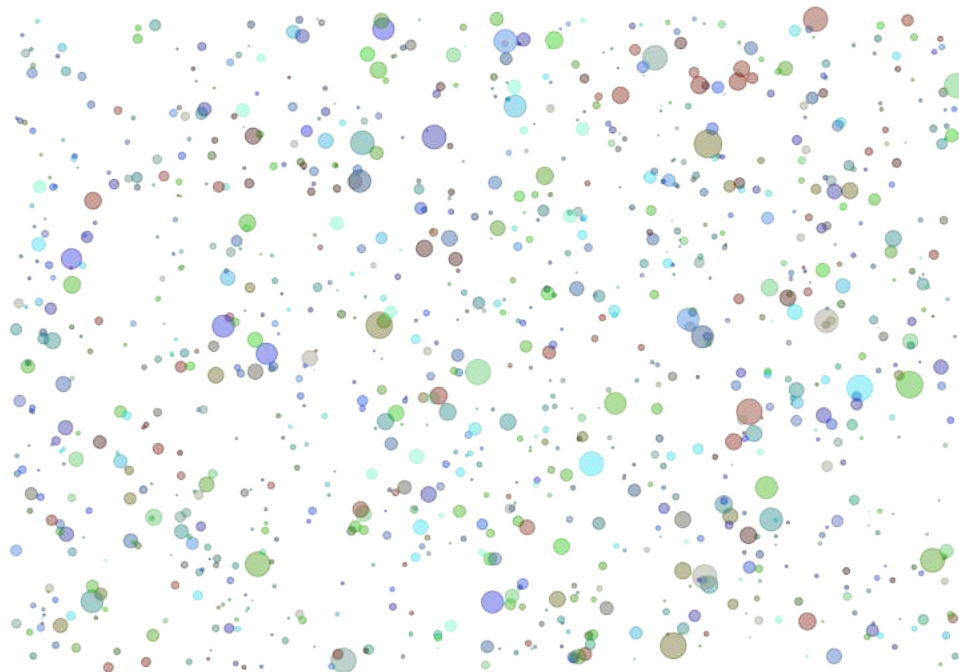
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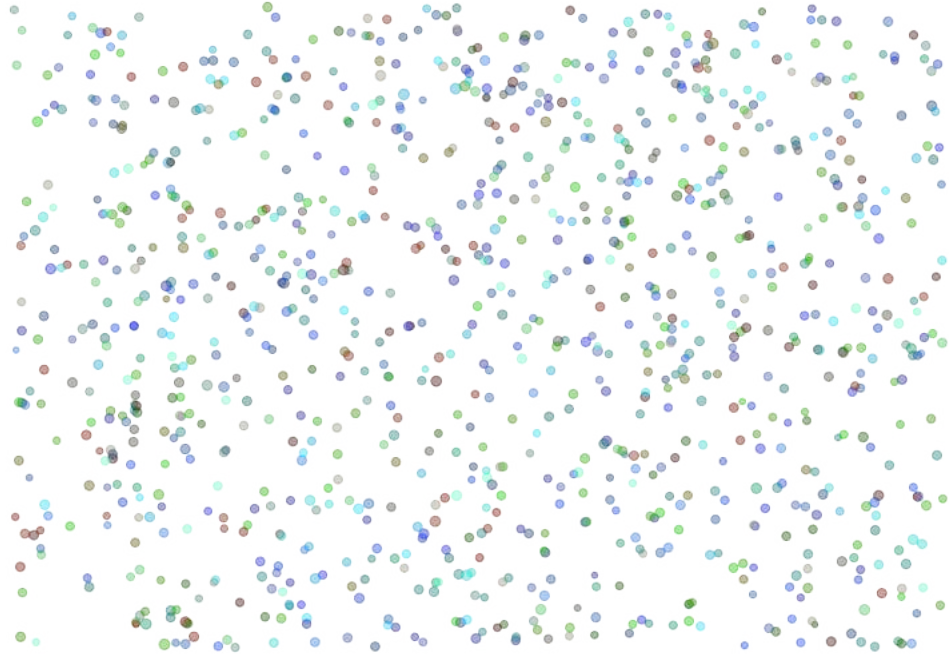
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Thanks!