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How To Run:

The program can run simply by opening index.js in any browser that supports canvas.

Users should see a map of the Houston/Galveston coastal area with the tuft animation playing over it. The UI consists only of two buttons: grayscale, which switches the color off/on, and pause, which pauses the animation in its current frame.

Tuft Animation Legend:

The animation is a series of 75x75 line tufts illuminated with simulated phong shading which bend and turn in accordance with the strength/direction of the wind, respectively. Bending will make them appear to stretch out longer from the top-down view. Areas with stronger wind have more bent tufts, and the tufts are bent in the direction of that wind. With grayscale off, the color of each tuft is mapped to the velocity at that point as in a standard heat map. These colors will still darken/lighten based on the lighting of the scene.