Here are some of the main applications for hexbin maps;

Choropleth maps – similar example provided by Professor Liu, using the spatial patterns technique to show all the color (or shade) coordinate patterns using large point-based datasets to develop a nice thematic map.

Density maps – to provide a visual understanding as to where the density concentration is represented in your map

Specific geo-location (points) of theme events or subjects of interest- to coordinate with the points showing all the important geographical related points on your theme map. Such as showing where all of the known locations of Costco in the Midwest are.