



Semester : V

Subject : Statistics for AI & DS

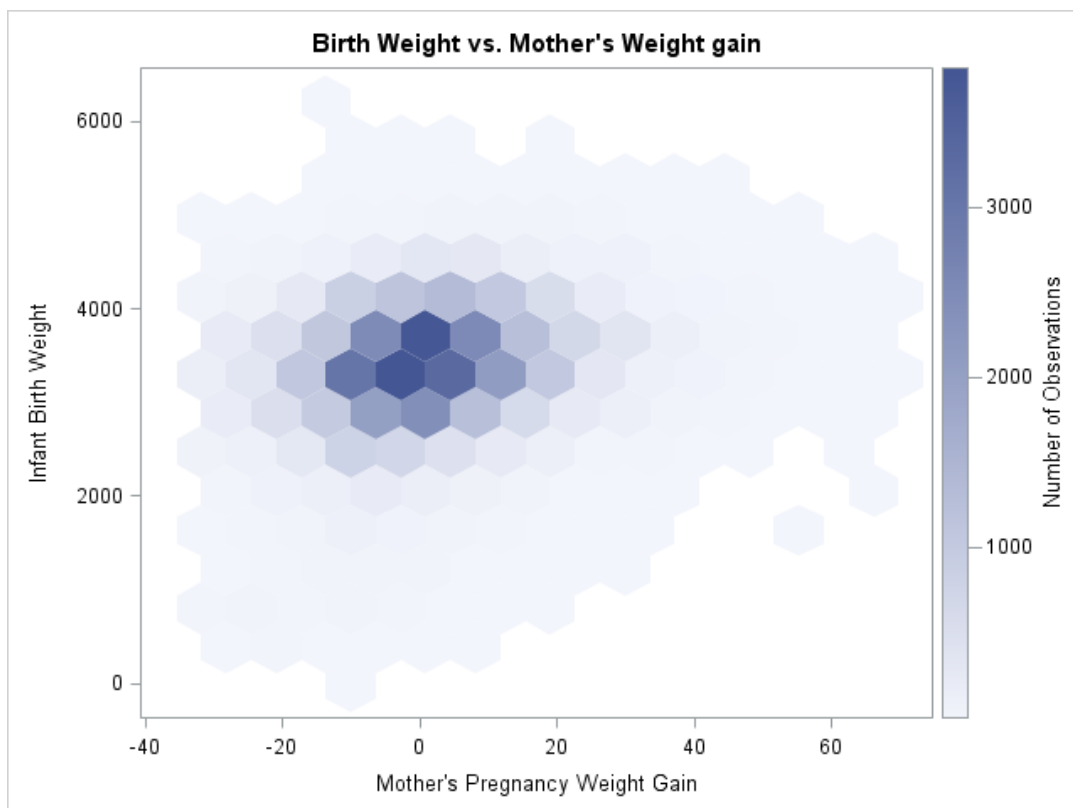
Academic Year: 2023 – 2024

### **HEXAGONAL BINNING:**

Hexagonal binning is a plot of two numeric variables with the records binned into hexagons. Rather than plotting points, records are grouped into hexagonal bins and color indicating the number of records in that bin. Hexagon binning is a form of bivariate histogram useful for visualizing the structure in datasets with large  $n$ . The underlying concept of hexagon binning is

extremely simple;

1. the  $xy$  plane over the set  $(\text{range}(x), \text{range}(y))$  is tessellated by a regular grid of hexagons.
2. the number of points falling in each hexagon are counted and stored in a data structure
3. the hexagons with count  $> 0$  are plotted using a color ramp or varying the radius of the hexagon in proportion to the counts.





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# A.P. SHAH INSTITUTE OF TECHNOLOGY

Department of Computer Science and Engineering  
Data Science



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The below graph is an example of Hexagonal bin plot between two variables – Mother's Pregnancy. Weight Gain and Infant Birth Weight. You see a faint light-blue haze where the density of points is low. Dark colors indicate regions for which the density of points is high (more than 3,000 points per bin, for this example).