

1154-AC-2163      **Rodney X Sturdivant\*** (rxsturdy@gmail.com) and **Robert E Burks**. *Data Driven Mathematical Modeling*.

The “Data Insights” problem became part of the Mathematical Contest in Modeling (MCM) in 2016. This problem is meant to include mathematical modeling challenges specifically associated with the use of data in addressing difficult open ended problems. While not necessarily a ‘big data’ problem, the teams are presented with real-world data with interesting complicating factors that impact their modeling efforts. We will provide an overview of the first few years of “Data Insights” problems and then discuss the types of data challenges the problems posed. We will include examples of how some of the outstanding teams handled these problems and highlight techniques used in data cleaning, visualizations, and ultimately producing data-based models to solve difficult problems. (Received September 17, 2019)