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When you collect large amounts of data during research, it increasingly becomes more difficult to graph manually using simple graphing tools such as Microsoft Excel, especially when multiple variables and result sets are involved. For example, graphing 10,000 points on a graph is easily accomplished in excel. However, if you have 10 spreadsheets worth of data, with each one containing a different testing result, it becomes difficult to integrate them into each other and create visualizations for data. The remedy to this is to use one of the many graphing programs and/or statistical languages available. This project explores the usage of the R project for statistical computing to create graphs for complex data sets by using R to import a large collection of data and generate various graphs using the data. The violin plots can be used to investigate how the change of each parameter value can affect the tumor growth pattern using a cancer model. The project was supported by NIH Grant P20GM103434 to the West Virginia IDeA Network for Biomedical Research Excellence and the NSF S-STEM grant DUE – 1259713.