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**Software Description:**

A command line tool that allows for user input of data sets, which can then be analyzed by various different statistical tools, and returns the data in a neatly formatted result based on the user's desire.

**Business Needs:**

With the ever increasing amount of data, along with the increasing value of data, businesses need a new tool to evaluate their data in a way that works for them. So, for this, we can create a tool for businesses to have the ability to process their data in an efficient manner that suits their needs, and help them better use and understand their information.

**Business Requirements:**

* Calculate measurements of center (mean, media, mode)
* Calculate measurements of data dispersion (minimum, maximum, range, standard deviation)
* Calculate probabilities of outcomes from data sets
* Calculate linear regression correlation from data sets (least-squares, residuals, outliers, r2)
* Calculate confidence intervals (population mean, *z* and *t* critical values)

**Business Value:**

We expect that being able to analyze big data is and will be a crucial part in how businesses learn and find patterns today and into the future. This tool makes calculating various statistical methods quick and easy to understand. A business can input any type of data, run various tests on that data, and gain insight into their customers decision making. In addition, the availability of an expandable library of statistical analysis tools and formulas will allow for expansion when necessary. As times change, so must the software being used within it.

**Special Issues and Constraints:**

* We think that this statistical tool is simple to use and easy to interpret. In the future we may decide to add a tool that graphically represents the data for better understanding of the data.
* We expect this tool to be complete before the end of 2019.
* We expect to create this tool using the IDE Intellij with java, Discord for team communication, Google Drive and Github for file sharing, and visual paradigm for UML diagrams.