Statistics Excel Extension

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Client: Dr. Abdelmonaem Jornaz, NWMSU Mathematics

Our project will address the problem Dr. Jornaz has of needing the work his students do in Excel to be more streamlined and user-friendly. Our solution is to create an extension for Excel, using Python, to automatically do some of the functions for the students using dialogue boxes. This is important for the math department because it allows for simplified teaching of statistics. It will impact the students of Northwest Missouri State University. Doctor Jornaz will see this as a load off the teachers backs because this software will make his job easier and allow for more students to get the knowledge they need in the statistics class.

The vision of this project is to create a seamless bridge between the computer calculations and the student’s minds. Lowering the amount of steps and streamlining the statistical functions allows for the students to spend less time setting up the hard functions on the computer and more time understanding how the mathematics works. This benefit on the statistics students creates a high value for this particular project.

The input is raw data that Dr. Jornaz has given students to practice statistics on, this could range from large data sets to just a few values, depending on the assignment. The output will be information of value to the statistics class, depending on the chosen function. We plan on using XLWings, an open source option to use Python with Excel, and will use GitHub for our project repository.

Our expected challenges are in understanding all the statistical functions, having to create deadlines and schedules, creating something that his students can easily and reliably install, and distributing the finished project. The requirements are defined but due to the lack of all the statistical information we may need to redefine requirements if something outside of our requirements happens to appear. After all requirements are met, the deliverable will be a package that can be installed on all students laptops that adds extra functionality to the excel program already installed on their laptops.

Despite these challenges, our group is confident that we can help Dr. Jornaz and complete our project. By the end of our project, we will deliver an add-on to Excel that all students using university laptops or computers can install and use. To communicate, our group will use e-mail, the canvas website, and GitHub commits in addition to in person meetings. Our project will not cost anything.