

# The power of Excel/VBA

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Some more motivation for learning the basics of Excel/VBA:

Microsoft Excel is undoubtedly one of the most popular and far-reaching computing tools throughout both the developed and developing world, utilized in diverse fields ranging from mathematics, accounting, financial analysis, business/administration, engineering, and the sciences. While numerous computing tools cater to niche, discipline-specific needs, no other computing tool is as familiar to as many academic, industrial, and financial institutions as Excel. Furthermore, many of these specialized computing tools are prohibitively expensive – a user license can cost hundreds or even thousands of dollars – and therefore be out of reach for individuals at smaller firms and in the developing world. Microsoft Office is commonplace among students and working professionals and is available at nominal cost since most consumers have access to Microsoft Office products.

Visual Basic for Applications (VBA) comes standard with Microsoft Office products, and allows users to customize their Excel spreadsheet environment. Users can record macros and create programmed subroutines that automate user-defined processes, such as filtering data, creating graphs, and consolidating information found within multiple files. The extremely applied nature of VBA for Excel allows direct manipulation, modification, and utilization of cells in an Excel spreadsheet. Developers can also define their own custom-made functions, which can be available as an add-in to any of their Excel workbooks. Finally, customized user forms can be tailored to obtain input, perform advanced calculations or manipulations of data, and/or provide organized output to the end-user. Easy-to-use, intuitive user forms can be prepared for clients whose knowledge of Excel/VBA is minimal.

Unfortunately, the full power and utility of VBA with Excel is tremendously underutilized. I have taught freshman-level computing a total of 12 times now over 8 years. Of the 15-week course, only 5 weeks are devoted to Excel/VBA, yet I am continually amazed by the ability of my students, who are primarily freshmen, to land jobs and internships specifically because they have knowledge of VBA for Excel. These students oftentimes create “quantum leap” changes in the way that companies deal with the handling and sorting of data, and in many cases the files and associated subroutines that these students create are distributed widely within that company for use by numerous individuals. While there are many open source programming languages (Python, Octave, R, others), employees in many industries find themselves inheriting complex VBA-encoded spreadsheets that they need to either modify or update, so an understanding of VBA is extremely valuable.

A vast array of online user forums exist

([www.excelforum.com](http://www.excelforum.com), [www.mrexcel.com](http://www.mrexcel.com), [www.excelguru.ca](http://www.excelguru.ca), <http://excelexperts.com>, [www.stackoverflow.com](http://www.stackoverflow.com), [www.ozgrid.com](http://www.ozgrid.com), and many others), and they offer an incredible amount of help to users seeking solutions to very specific problems. Unfortunately, this information is poorly organized for new learners and is meant for advanced users with very niche problems. For individuals seeking to learn VBA from the “ground up” in a comprehensive manner and not just seeking a quick fix, these online “help” forums are of little value and extremely intimidating.

Thanks for joining me!

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