{ggmagic} Building a data visualization recommendation package

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Abstract

Thanks to the great flexibility of {ggplot} newcomers to the package have many challenges familiarizing themselves with the different functionalities to create different chart types. Many times users simply want to create a simple bar or a line chart in those cases it may become cumbersome for the user to think about x and y-axis, how layers work and may spend a lot of time performing simple customizations. With {ggmagic} users don't need to think about those details, our package automatically selects the most sensible visualization type given their data and understands the most common data types to select the required scales. Other approaches like {ggcharts} provide great interfaces for R programmers when they already know which type of chart they want to use, that is, users still need to think about which type of chart works best and which variables go in which axis, on the other hand, {ggmagic} selects and reorders variables in a way that it magically works for different chart types and provides a flexible API with options to customize the charts with advanced theming either with inline arguments or with configuration lists suitable for programming. In this talk we want to talk about the challenges building the package and to showcase our learnings and the design decisions we made to make a package that works with unknown data input types. While building {ggmagic} we faced many challenges, like working with multiple locales to make charts for seamlessly in spanish and other languages (think of custom currencies and date formats) that led to the development of a couple of our accompanying packages and the incorporation of other packages like {vctrs} to enhance {ggmagic}'s building blocks over the years. We want to communicate the process to inspire and allow participants to learn from our mistakes.