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Proposal 1

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Brief title: Stream and download real-time market data from Ally Bank’s API, and provide helpful wrappers to send trading commands and receive status updates.

Description: This analytic will connect to Ally Bank’s API, authenticate the user, and will provide helpful functions to communicate with this API. Specifically, the analytic will be able to download real-time market data, plot this data, and perform some basic analytics (moving averages, standard deviation, etc.). The analytic will also provide functionality to send market orders real-time, then monitor the status of those orders.

This analytic would be useful to any investor or trader who is comfortable using code to trade. The proliferation of “code-able” market trading platforms has increased the number of market participants who desire more control over their trades. Being able to make trades from the R console could be beneficial, as there would only be a single layer between the command and the API.

If the analytic is fully deployed in Shiny, then simple knowledge of any UI would suffice. However, if this analytic also resides in an R package and users want access to the native functions, then some coding knowledge will be needed. Other needed skills would be general trading knowledge.

There are no advanced statistical methods contained in this analytic. The majority of this analytic is dealing with API communication. This is a REST API, and uses REST operations as well as FIX protocol massages (using the FIXML standard). If the analytic is deployed in Shiny, then users can access it on whatever device will allow it (I’m assuming HTML, but not 100% sure how Shiny works). As this analytic will log into an active trading account, security will be a major concern. The R package ROAuth seems adept at performing these operations.