A dashboard for calculating hourly energy balance

This talk would share a shiny dashboard I created using flexdashboard: <https://rothschild.shinyapps.io/Energy-balance/>

This app calculates hourly energy balance and allows an athlete/coach/dietitian to identify if someone is spending too much time in too big of an energy surplus or deficit, and plan meal sizes accordingly based on their exercise.

As a dietitian this is something I’ve thought about and wanted to build for quite a while, as many people focus too much on daily energy balance and underestimate the importance of within-day balance. Put simply, if someone exercises in the morning and eats all of their food at dinner time, even if they are in a calorie balance it is not the healthiest way of eating.

The talk will explain the rationale for the app and walk through the steps I took to build it – starting with the thought process and a static r script, adding the interactive features, and customizing the design. I will also talk about some of the few challenges I faced along the way such as customizing the CSS and needing to combine characters and a continuous ggplot scale.

This talk would be aimed at people with an understanding of basic r coding and an interest in applying that to dashboards.

Jeff Rothschild

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I am from California but currently in Auckland doing my PhD in exercise physiology. My biggest fear prior to moving to New Zealand was that I was going to be forced to learn R for my analysis. Seriously. A few months in I needed it to do one specific thing, which I was reluctantly shown how to do. After that, I have used R literally every day over the past 2.5 years and it has drastically altered the direction of my PhD (and subsequent career), as my projects have evolved heavily into data science. I am comfortable speaking to groups (as a dietitian) but have never presented anything related to R.