

Healthier ❤️ & Happier 😊 Hands 🙌

Software and Hardware Solutions for
More Ergonomic Typing

by John Paul Helveston

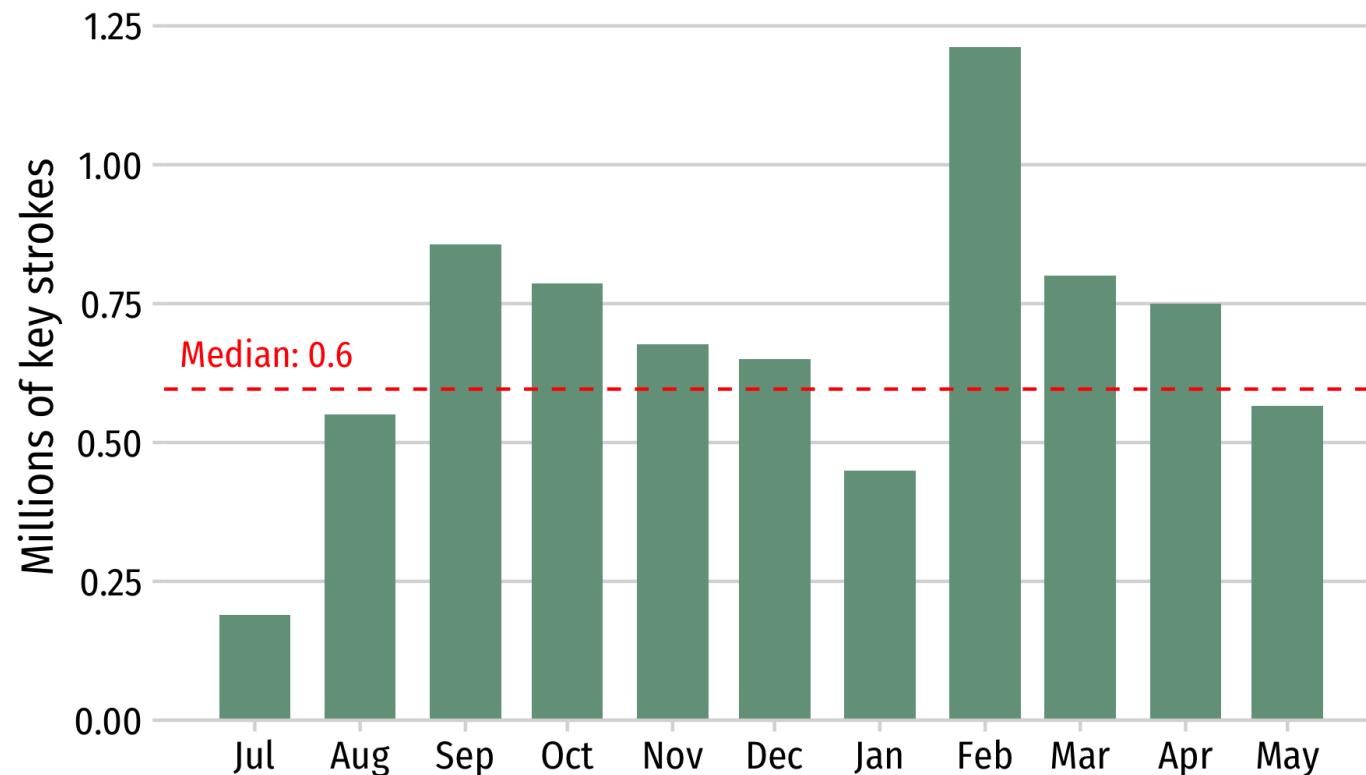
2021 useR! Conference



Last year I typed 7.5 million key strokes

Monthly key strokes on John's keyboard

(July 2020 - Present)



Practice Typing

<https://www.keybr.com/>



Master keyboard shortcuts

Insert <- with:

alt/option + -

Insert %>% with:

ctrl/cmd + shift + M

Learn shortcuts

Align messy code:

Ctrl + I



Kyle Walker
@kyle_e_walker

One of my favorite [@rstudio](#) shortcuts: Ctrl+I. If your code is misaligned/messy for whatever reason, RStudio will clean it right up for you. [#rstats](#)

```
library(tidy census)
options(tigris_use_cache = TRUE)

pg_hh <- get_acs(geography = "tract",
                  state = "MD",
                  county = "Prince George",
                  variables = "DP02_0003",
                  geometry = TRUE)
```

GIF p Level) : R Script :

10:46 AM · Apr 15, 2019

1.3K 28 Copy link to Tweet

Learn shortcuts

Use multiple cursors:

Hold Alt/Option +
click & drag

Irene Steves
@i_stevens

Loved the cooking metaphors in @hadleywickham's @RLadiesSF talk yesterday! but the best part was watching Hadley speed-code live and learning neat tricks like this:

```
R Untitled1* x
Source on Save
1 # press ALT when you highlight to
2 # edit several lines at once!
3
4 a
5 b
6 c
7 d
8 e
9
10 # delete to merge them into a single row
```

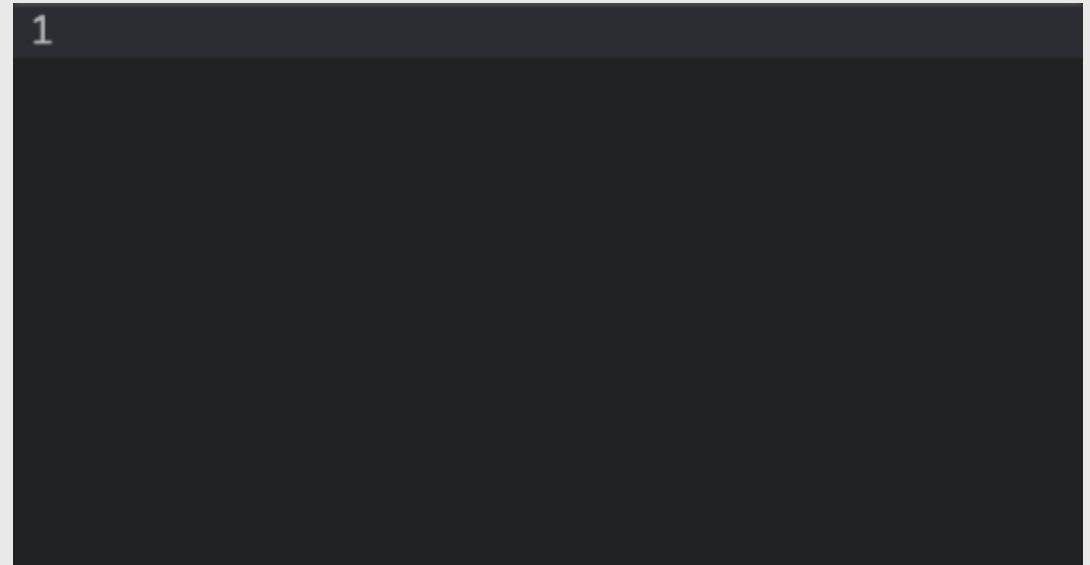
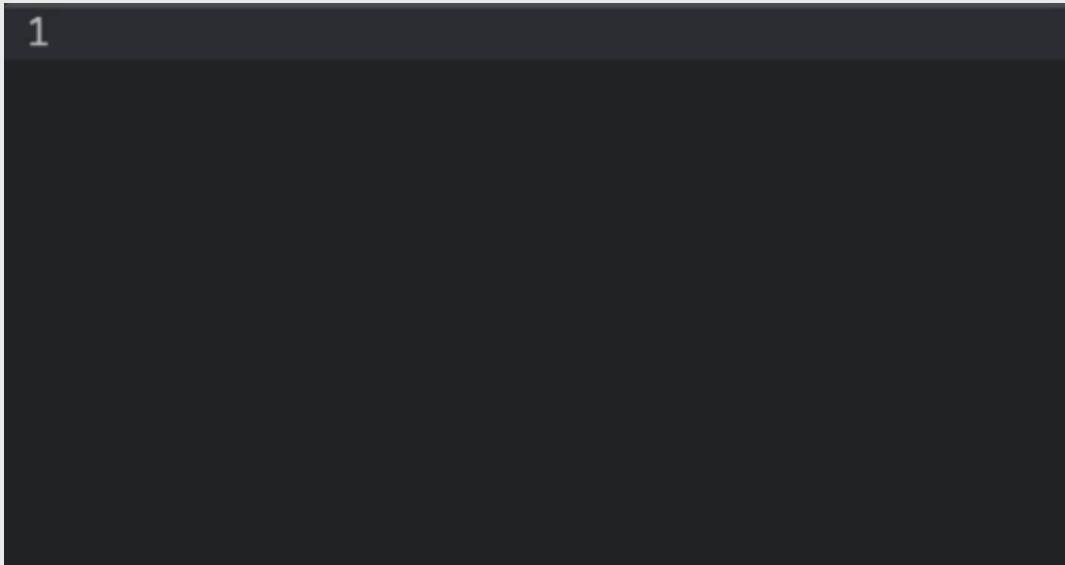
GIF

4:05 PM · May 12, 2018

6 / 21

A screenshot of a Twitter post by Irene Steves (@i_stevens). The post includes a profile picture of Irene, her handle @i_stevens, and a blue Twitter bird icon. The tweet text reads: "Loved the cooking metaphors 🍴🎂 in @hadleywickham's @RLadiesSF talk yesterday! but the best part was watching Hadley speed-code live and learning neat tricks like this:". Below the tweet is a screenshot of a code editor window titled "Untitled1*". The code shown is: 1 # press ALT when you highlight to 2 # edit several lines at once! 3 4 a 5 b 6 c 7 d 8 e 9 10 # delete to merge them into a single row. A large blue play button icon is overlaid on the code editor window. At the bottom left of the code editor is a "GIF" label. The timestamp "4:05 PM · May 12, 2018" and a small info icon are at the bottom right.

Use a text expander



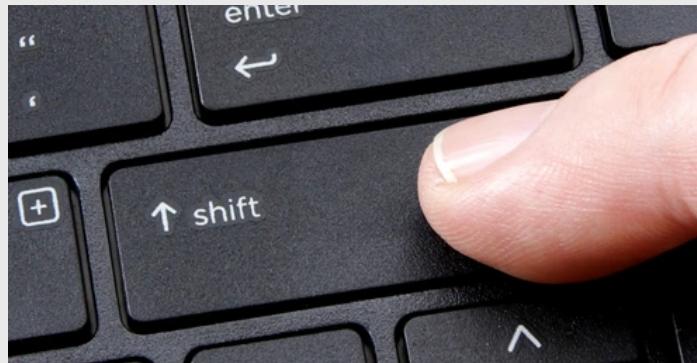
Powered by
espanso

See my post on espanso at <https://www.jhelvy.com/blog>

Use custom keyboard layers

Base layer

1234567890
qwertyuiop
asdfghjkl'
zxcvnm.,/



Shift layer

!@#\$%^&*()
QWERTYUIOP
ASDFGHJKL"
ZXCVBNM<>?





Example: Caps Lock Layer

Cut, Copy, Paste Navigation



Forward / Back Delete

RStudio File Edit Code View Plots Session Build Debug Profile Tools Window Help Thu Jun 17 10:31 AM

foo - master - RStudio

foo.R*

```
1 library(tidyverse)
2
3 mtcars %>%
4   ggplot() +
5   geom_point(aes(x = hp, y = mpg)) +
6   scale_x_continuous()
7
```

Console Jobs ~/gh/staging/foo/ ↵

```
+ scale_x_continuous() +
+ scale_y_continuous() +
+ theme_bw()
> library(tidyverse)
>
> mtcars %>%
+   ggplot() +
+   geom_point(aes(x = hp, y = mpg)) +
+   scale_x_continuous()
>
```

Files Plots Packages Help Viewer

Zoom Export Publish

mpg

hp

0:00 / 0:22

12 / 21

Mac

<https://karabiner-elements.pqrs.org/>

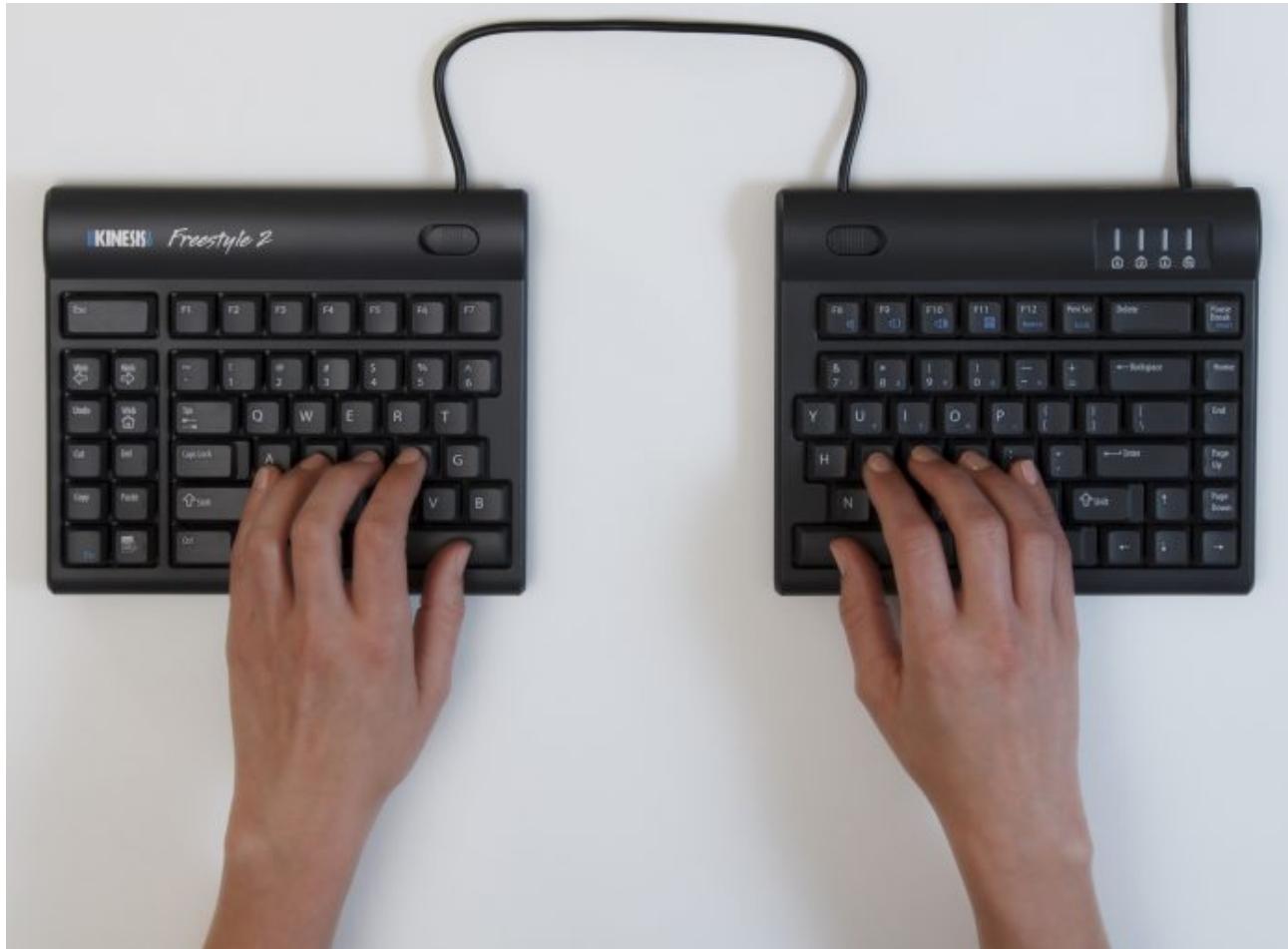


Windows

<https://www.autohotkey.com/>



Use a split keyboard



Reduce Ulnar Deviation



Reduce Forearm Pronation



Think of your keyboard as a medical device



KINESIS Freestyle 2
\$89.00



Logitech - ERGO K860
\$129.00



Average cost of glasses
\$242.00

Use a split keyboard ***that has thumb keys***



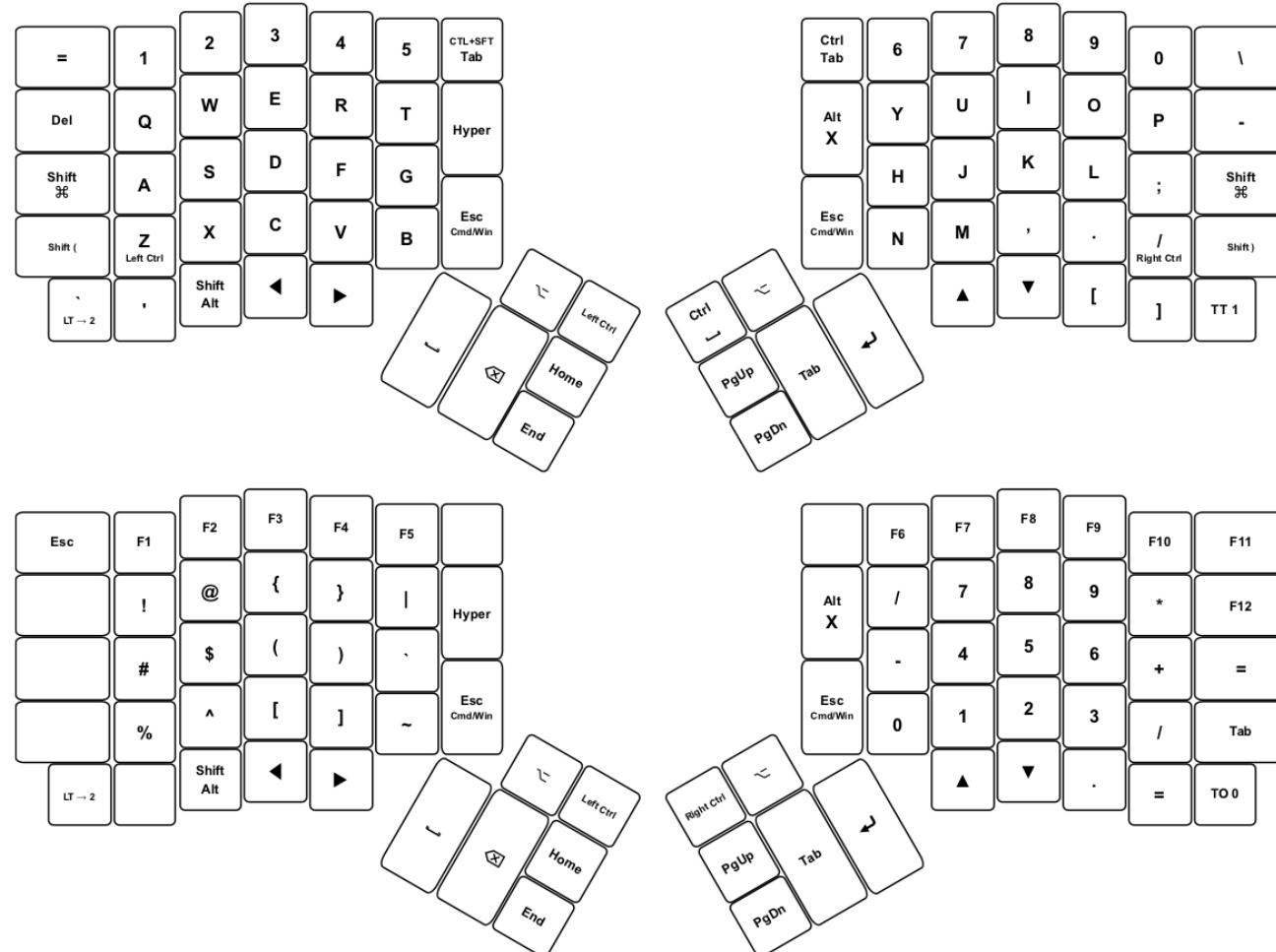
Ergodox EZ (~\$350.00)

Build Your Own Keyboard for Less!



Iris (~\$200.00), Powered by [QMK Firmware](#)

Use a split keyboard *that is programmable*



My Iris Keyboard:



Thanks!



Slides:

<https://jhelvy.github.io/2021-useR-healthy-hands>

My Karabiner Elements Settings:

<https://github.com/jhelvy/jkeyboard>

My Iris Keyboard:

<https://github.com/jhelvy/iris-rev2>

@JohnHelveston

@jhelvy

@jhelvy

jhelvy.com

jph@gwu.edu