What is Possible with R

and Posit

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How they are different

A programming language

A company that makes software for writing R and Python code, analyzing data

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HOW IT’S BEEN

What have we done?

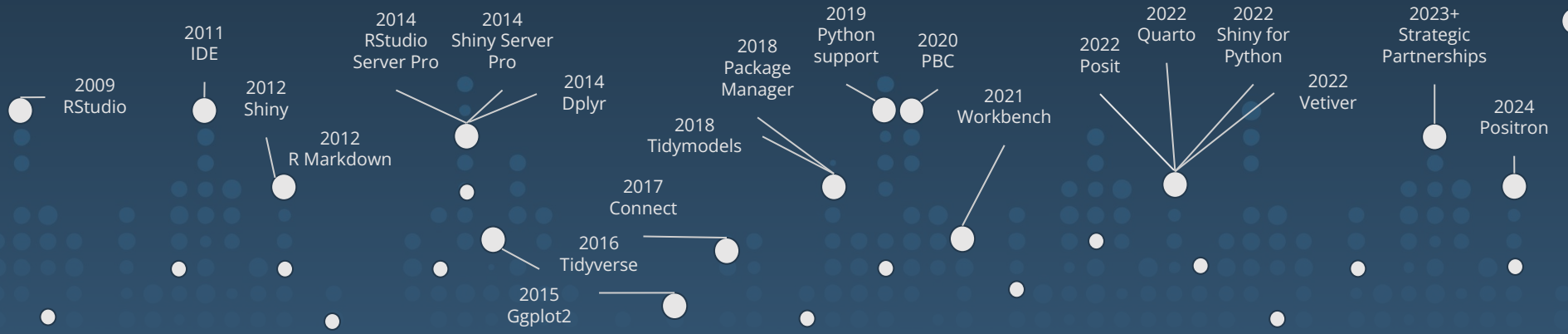
mmm, a lot!

Posit - the power of open-source for the enterprise

We are a for-profit Public Benefit Corporation committed to producing public good through our open-source tools and packages.

Governments around the world use our professional and open-source tools.

We are committed to remaining independent.



HOW IT'S GOING

What are people doing with R these days?

Let's start small and work up to complex

The simplest useful thing

```
---
title: "Explore your table"
format: dashboard
---

```{r}
library(wehoop)
library(reactable)
```

```{r}
espn_wnba_standings(2004) |>
   reactable(filterable = TRUE)
```
```

simple-table.qmd

One table of data into an interactive html page

We overestimate what is required to be useful!

Automate something for someone = Hero!

The next simplest useful thing

```
pwb_release_page <-
read_html("https://docs.posit.co/ide/news/")
pct_release_page <-
read_html("https://docs.posit.co/connect/news/")
ppm_release_page <-
read_html("https://docs.posit.co/rspm/news/package-manager/")

prep_text <- function(text) {
  dat <- str_split(text, pattern = "\n") |>
    unlist()
  dat <- keep(dat, .p = nchar(dat) >= 1 & !str_detect(dat,
"^\\s*$"))
  dat
 }
```

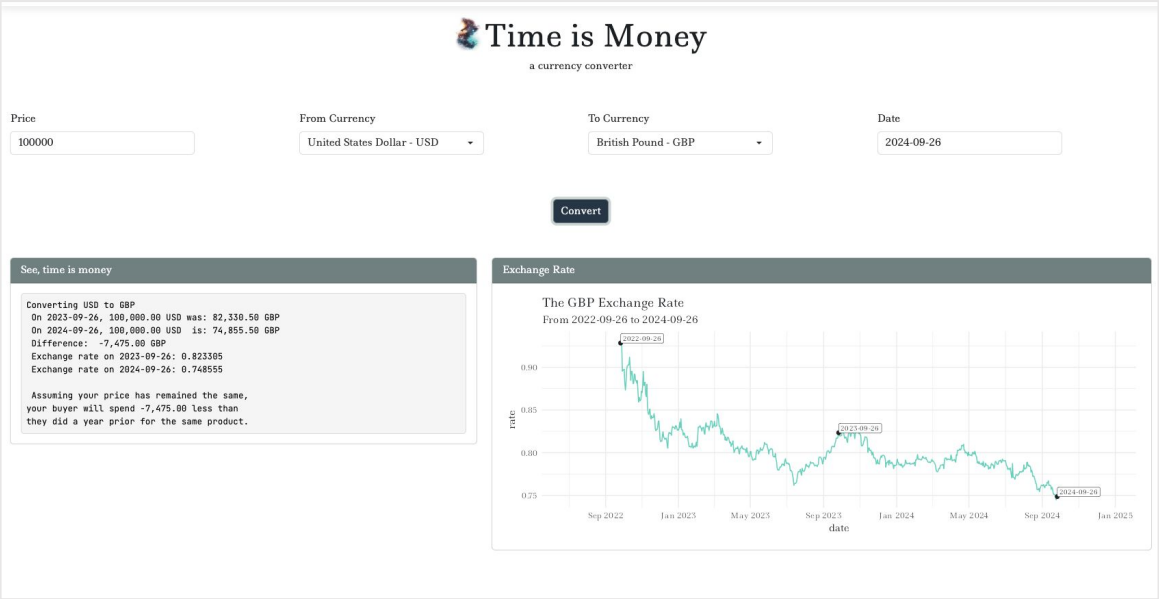
scrape-web.qmd

No report or app output.

- Scrape the data
- Clean the data
- Pin the data
- Done

Another script will use the data

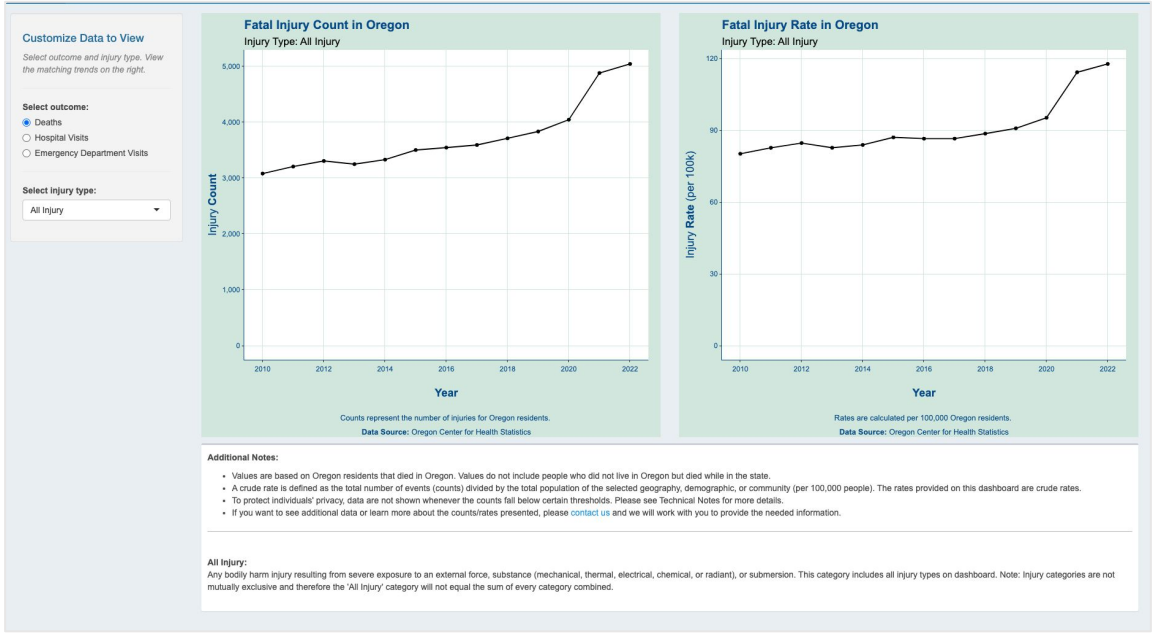
A useful thing: a custom currency conversion app



I didn't like the available ones, so I made one that serves my needs

Relies on someone else's API service

A very useful thing: injury data, State of Oregon

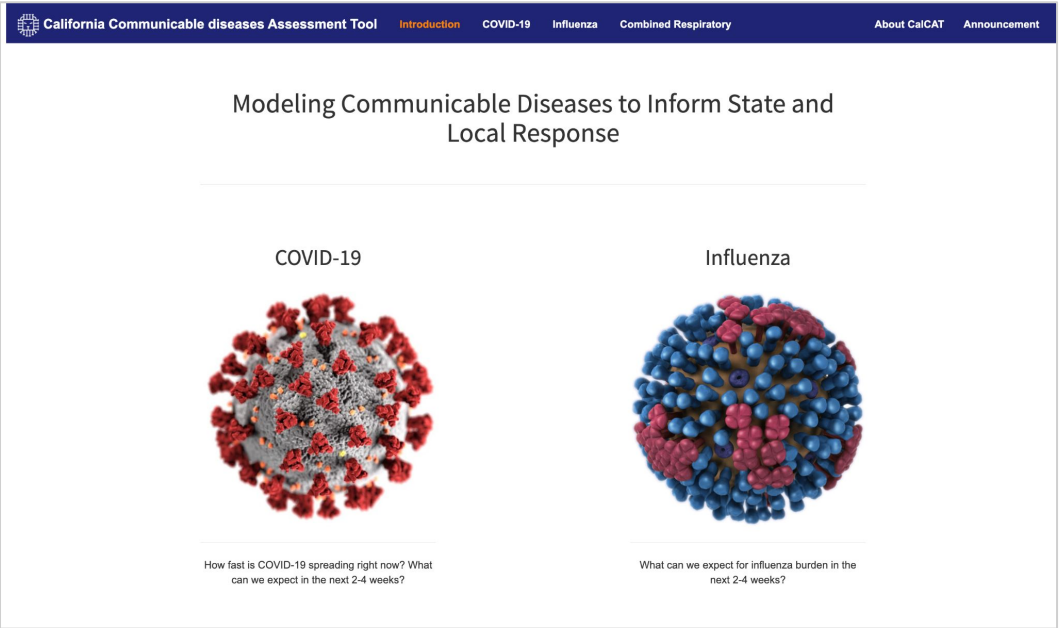


A multi-page Shiny dashboard

[It's hosted on shinyapps.io]

Data must be sanitized, state must approve

California COVID Assessment Tool (CALCAT)



A multi-page Shiny app deployed on a cluster of Posit Connect servers

Multiple models
Input from users
Downloadable data
Complex architecture

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Story Time – other government use cases

Soil and water science support Farm Bill fund disbursement
Air quality on the International Space Station
Climate effects on Salmon population
Drought monitoring
Global conflict
Census
Unemployment rates
Anti-fraud enforcement
Equal Opportunity enforcement
and a million more...

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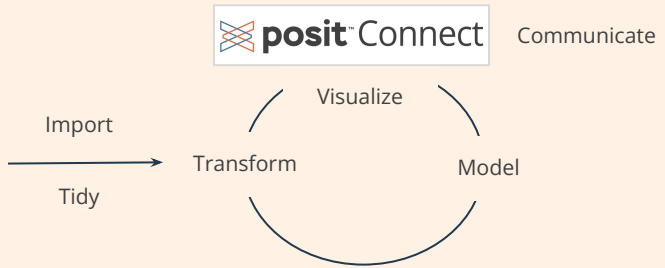
R in Production

In production of what?

The difference matters

Two Contexts for Code in Production

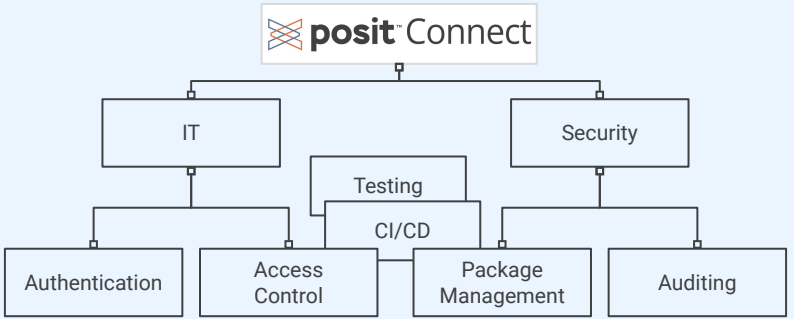
Conducting Research and Analysis



Priorities:
Speed, Sharing, Simplicity, Reproducibility, Security , Control, Stability

Goal:
Create knowledge efficiently

Hosting Enterprise Applications



Priorities:
Security , Control, Stability, Reproducibility, Sharing, Speed, Simplicity

Goal:
Share knowledge securely

Learning

Where to begin?

Resources

It's never too late to start

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- The Big Book of R
- R for Data Science book
- Advanced R
- R Packages
- Mastering Shiny
- Posit demo playlist
- Posit Data Science Hangout
- Posit Community
- R for Data Science Community
- R Ladies Community
- Posit Academy

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Data Science **Hangout**

posit™

VIRTUAL: EVERY THURSDAY @ 12 ET

Gathering place for the data science community to **chat about data science leadership and questions you're facing**

All are welcome, no need to register. Listen-in, join-in, or ask questions anonymously!

LEARN MORE
pos.it/dsh