1. Use to see span durations

# 2. For long R spans, use {profvis} to see where code is slow

# 3. Optimize R code:

1. Move work out of Shiny server (very often)

2. Make code faster (very often)

# 3. Use caching (sometimes)

4. Non-blocking reactivity (sometimes)

#### 4. Repeat!

### Joe Cheng '19 Shiny in production

Pertormance workflow







# OpenTelemetry



- 1. Use OpenTelemetry to see span durations
- 2. For long R spans, use {profvis} to see where code is slow
- 3. Optimize R code:
  - 1. Move work out of Shiny server (very often)
  - 2. Make code faster (very often)
  - 3. Use caching (sometimes)
  - 4. Non-blocking reactivity (sometimes)
- 4. Repeat!



# Next Steps