

# GCC: GitHub Contributions Chart Generator

## ——A Shiny App Generated by **shinybulma**

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### 摘 要

在 GitHub 的首页可以看到一副日历图, 是你自己每天的贡献值。这个图非常有趣, 使用 Sallar Kaboli 开发的 API: [sallar/github-contributions-api](#) 可以获取指定账户的每日贡献数据, 例如我的: [czxa](#)。作者还据此开发了一个网站用于生成指定账户的贡献图谱: [sallar/github-contributions-chart](#)。我想是不是可以使用该作者开发的接口和 R-Shiny 写一个 Shiny App 实现类似的功能。于是就有了这个 gcc(GitHub Contributions Chart) App。

## 1 编写 Shiny App

Shiny App 由两部分组成, UI 界面设计和 Server 服务器运行。gcc 应用的 UI 界面是使用 **shinybulma** 设计的, Server 部分负责程序的运行, 包括数据处理、绘图、数据下载和图片下载四部分。具体源代码可以参考 [app.R](#)。

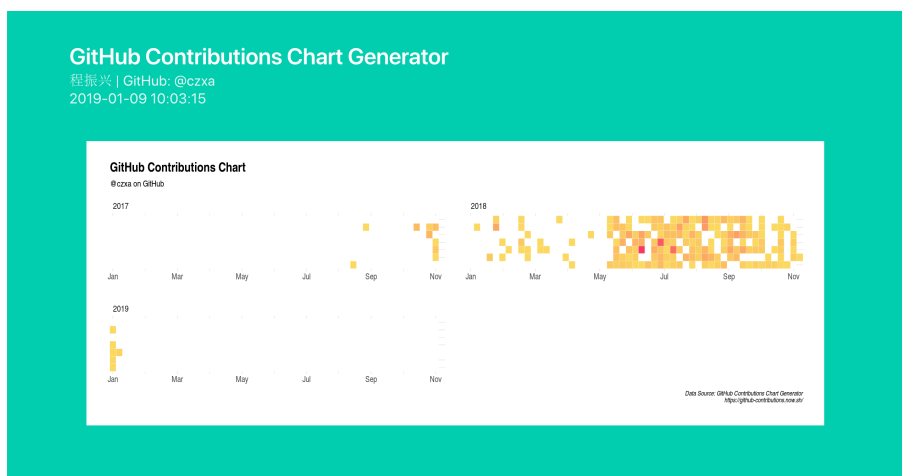


图 1: GitHub Contributions Chart Generator

这幅日历图可以使用下面的代码绘制:

```

library(jsonlite)
library(lubridate)
library(tidyverse)
library(ggplot2)
df <- fromJSON('https://github-contributions-api.now.sh/v1/czxa')
df$contributions %>%
  mutate(
    date = ymd(date),
    month = month(date),
    week = wday(date),
    year = year(date),
    count = ifelse(count == 0, NA, count),
    weekdays = week(date)
  ) %>%
  ggplot() +
  geom_tile(aes(x = weekdays, y = week,
               fill = count), color = 'white') +
  facet_wrap(~year, nrow = 2, scales = 'free') +
  scale_fill_continuous(
    low = '#FEDB62',
    high = '#FC3C63',
    name = 'Contributions',
    na.value = 'white'
  ) +
  scale_x_continuous(
    expand = c(0, 0),
    breaks = seq(1, 52, length = 6),
    labels = c("Jan", "Mar",
               "May", "Jul",
               "Sep", "Nov")) +
  labs(title = "GitHub Contributions Chart",
        subtitle = '@czxa on GitHub',
        caption = "Data Source: GitHub Contributions Chart Generator\nhttps://
github-contributions.now.sh/") +
  theme_ipsum(base_family = enfont) +
  theme(axis.title.x = element_blank(),
        axis.title.y = element_blank()) +
  theme(axis.text.y = element_blank(),
        legend.position = 'none')

```

除此之外，该 Shiny App 还提供了年度的汇总和日度线图展示（如图 3）。

年度汇总的核心绘图代码为：

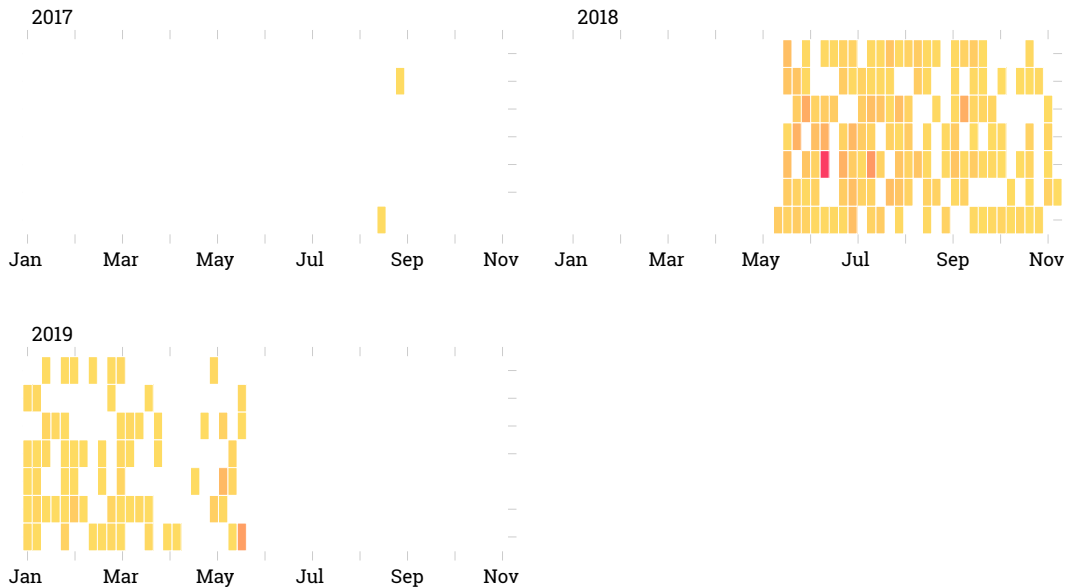
```

df$years %>%
as_tibble() %>%

```

## GitHub Contributions Chart

@czxa on GitHub



Data Source: GitHub Contributions Chart Generator  
<https://github-contributions.now.sh/>

图 2: GitHub 贡献图谱

```
type.convert() %>%
  ggplot() +
  geom_col(aes(x = year, y = total, fill = factor(year))) +
  theme_ipsum() +
  theme(axis.title = element_blank()) +
  scale_fill_manual(
    values = c("#31CF65", "#FEDB62", "#FC3C63", '#00D1B2', '#3273DC', "#31CF65", "
      #FEDB62", "#FC3C63", '#00D1B2', '#3273DC', "#31CF65", "#FEDB62", "#FC3C63",
      '#00D1B2', '#3273DC')) +
  theme(legend.position = 'none')
```

日度线图的核心绘图代码为:

```
df$contributions %>%
  mutate(
    date = ymd(date),
    month = month(date),
    week = wday(date),
    year = year(date),
    count = ifelse(count == 0, NA, count),
    weekdays = week(date)
  ) %>%
  mutate(count = ifelse(is.na(count), 0, count)) %>%
  ggplot() +
```

```

geom_line(aes(x = date, y = count, color = factor(year))) +
scale_color_manual(values = c("#31CF65", "#FC3C63", "#3273DC", "#FFDD57", "#31
  CF65", "#FC3C63", "#3273DC", "#FFDD57", "#31CF65", "#FC3C63", "#3273DC", "#
  FFDD57')) +
guides(color = "none") +
theme_ipsum() +
theme(axis.title.x = element_blank(),
  axis.title.y = element_blank())

```

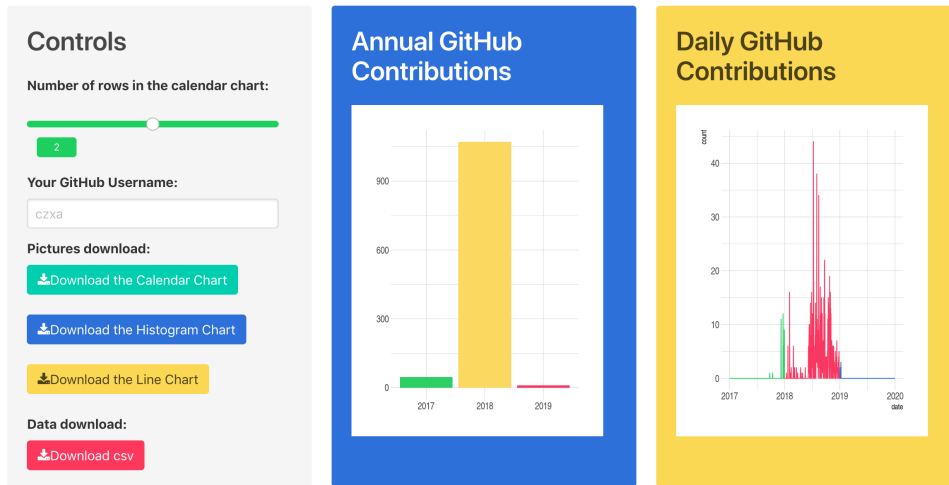


图 3: GitHub Contributions Chart Generator 的额外功能

## 2 将 Shiny App 包装成 R 包

安装:

```

install.packages("devtools")
devtools::install_github("czxa/gcc", dependencies = TRUE)

```

使用:

```
gcc::gcc()
```

在线使用:

我把这个应用部署在了 shiny 官方服务器上, 地址: <https://czxa.shinyapps.io/github-contributions-chart/>。

## 参考文献

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