

Data Analysis Report

Michael V Cumbo

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1 Introduction

This paper was written in response to the United Auto Workers strike and the SAG-AFTRA strike of 2023. The goal of gathering the data is to contextualize the state of trade union power in the United States, blending data analysis with a literature review. The data in this paper will contextualize union power in a select number of nation-states, adding perspective to the modes of influence unions have.

This report is a month to month analysis of labor action tracker newly recorded data. The report should give an assessment of trends in the strike activity. The regions in focus will be the DMV which consist of The District of Columbia, Maryland and Virginia.

2 Data Prep

```
source("~/Lab2/Trade_Union_Global_Analysis/summary_analysis/Enviroment_Setup.R")

suppressPackageStartupMessages({
  library(ggplot2)
  library(dplyr)
})

# connect to the database and pull out the sheet
setwd("~/workbook")
con <- dbConnect(RSQLite::SQLite(), "trade_union_data.db")
dbListTables(con)

## [1] "CBCR"
## [2] "CollectiveBargaining"
## [3] "ILRLaborActionTracker"
## [4] "IRL&ScrappedDataComparision"
## [5] "LAT-02.19.24"
## [6] "LAT-03.04.24"
## [7] "LAT-04.01.24"
## [8] "State_Union_Coverage_Density_1977-2021"
## [9] "State_Union_Membership_Density_1964-2021"
## [10] "Strikes_United_States"
## [11] "TUDR"
## [12] "TradeUnionDensity"
## [13] "WorkplaceRights"
## [14] "raw_strike_table"
## [15] "rawonlystrike_table"
## [16] "state_union_coverage_density_long"
## [17] "state_union_membership_density_long"
## [18] "state_uniondc_join"
```

```
## [19] "strike_table"
## [20] "summarytable_IRLvSData"

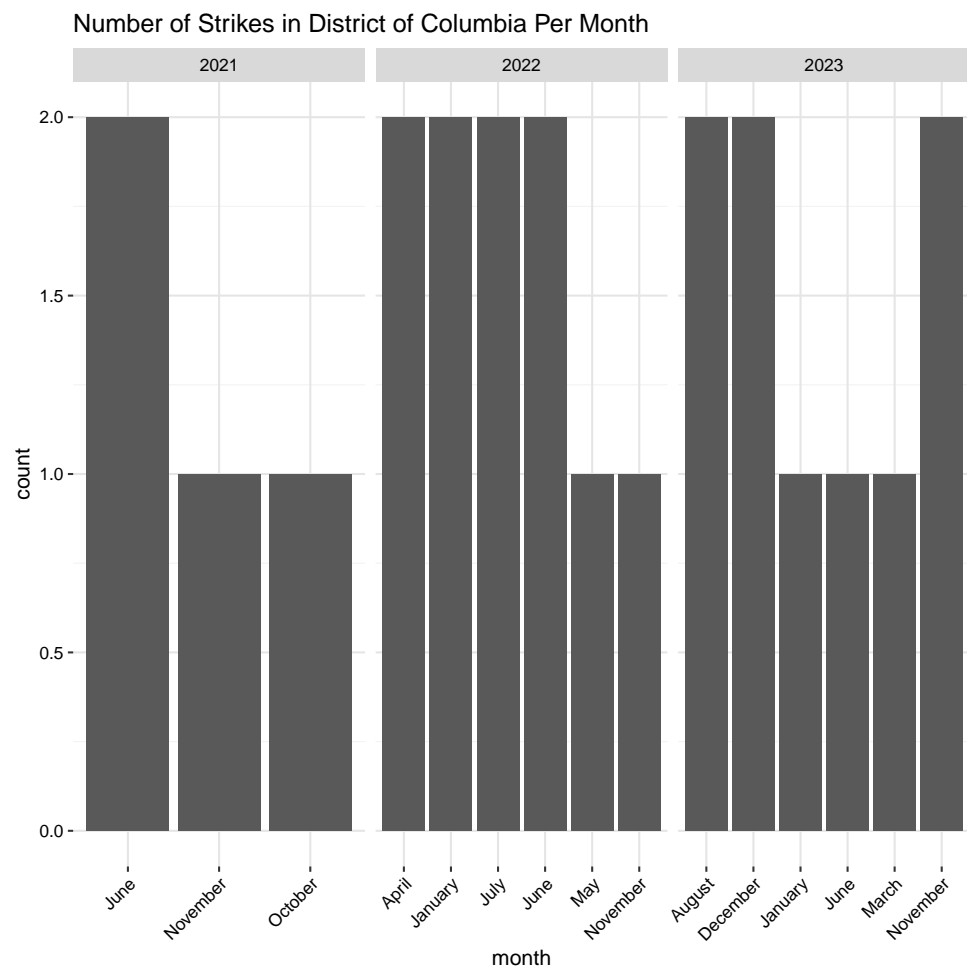
february <- as_tibble(dbReadTable(con, "LAT-02.19.24"))
dbDisconnect(con)
```

```
# Convert Timestamp column to POSIXct format
february$Timestamp <- as.POSIXct(february$Timestamp,
  format = "%m/%d/%Y %H:%M:%S"
)

# mutate zip code to a character
february <- february %>%
  mutate(
    ZipCode = as.character(ZipCode),
    BargainingUnitSize = parse_number(as.character(BargainingUnitSize)),
    ApproximateNumberOfParticipants =
      parse_number(as.character(ApproximateNumberOfParticipants)),
    Date = format(Timestamp, "%Y-%m-%d"),
    month = format(Timestamp, "%B"),
    Year = format(Timestamp, "%Y"),
    DurationAmount = as.integer(DurationAmount)
  )
```

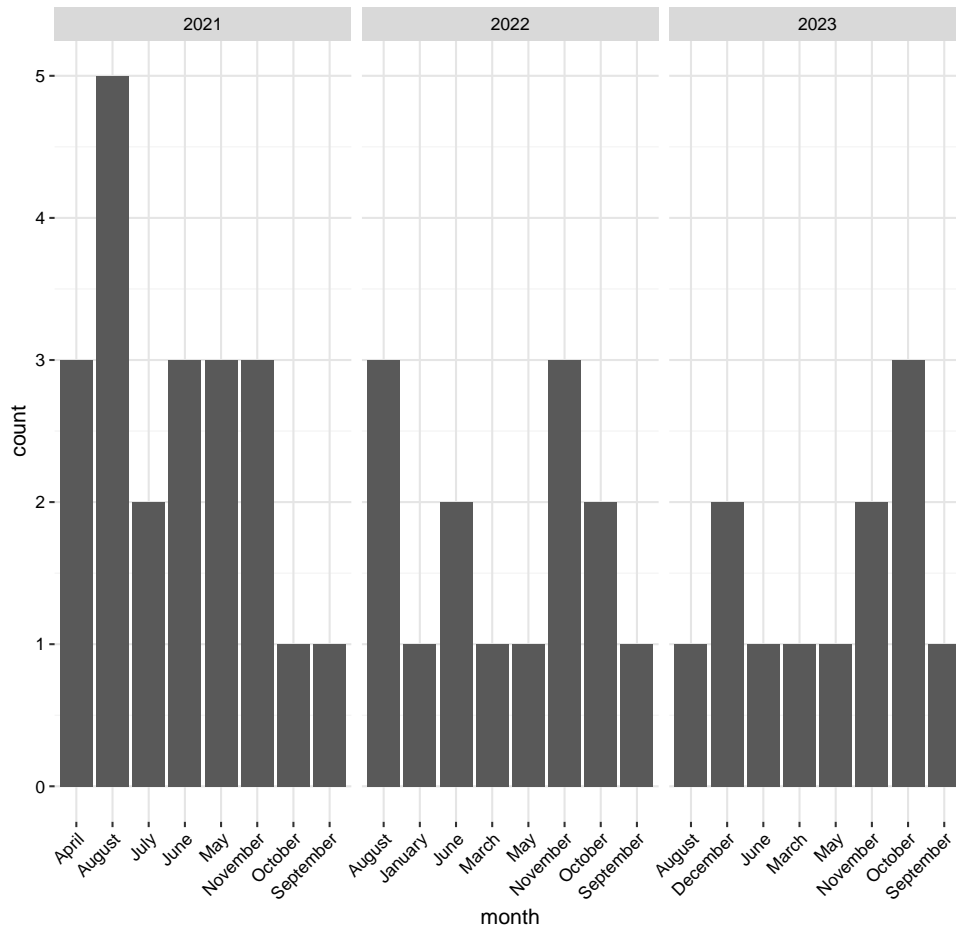
```
## [1] "the total number of available data points in the BargainingUnitSize vector is 211"
## [1] "the total number of missing/blank data points in the BargainingUnitSize vector is 2655"
## [1] "the total number of missing/blank data points in the notes vector is 380"
```

3 Data Analysis

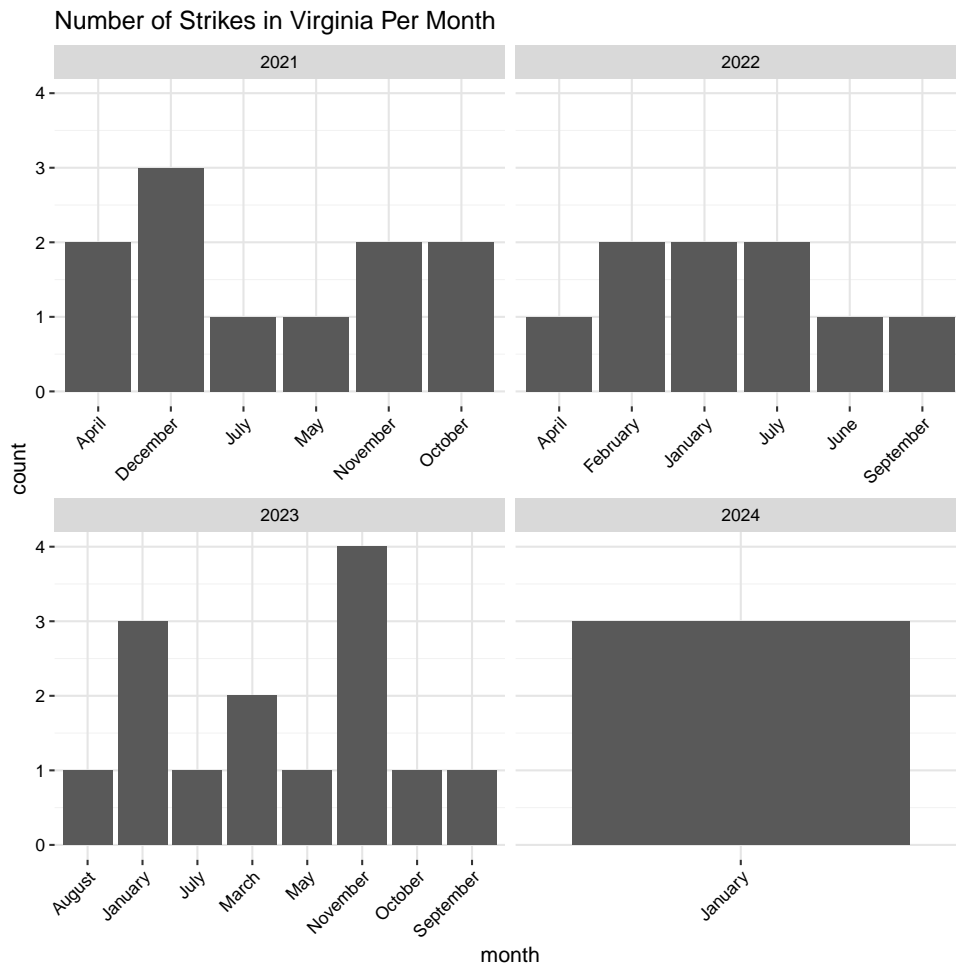


```
## The number of active labor organizations during the selected
## period of 2021, 2022, 2023, 2024 in District of Columbia is 15 .
## # A tibble: 3 x 4
##   State      Year labor_org_count
##   <chr>    <chr>         <int>
## 1 District o~ 2021             3
## 2 District o~ 2022             7
## 3 District o~ 2023             8
## # i 1 more variable: strikes <int>
```

Number of Strikes in Maryland Per Month



```
## The number of active labor organizations during the selected
## period of 2021, 2022, 2023, 2024 in Maryland is 28 .
## # A tibble: 3 x 4
##   State    Year labor_org_count
##   <chr>   <chr>         <int>
## 1 Maryland 2021             11
## 2 Maryland 2022             14
## 3 Maryland 2023             11
## # i 1 more variable: strikes <int>
```



```
## The number of active labor organizations during the selected
## period of 2021, 2022, 2023, 2024 in Virginia is 21 .
## # A tibble: 4 x 4
##   State    Year labor_org_count
##   <chr>   <chr>         <int>
## 1 Virginia 2021             8
## 2 Virginia 2022             7
## 3 Virginia 2023            12
## 4 Virginia 2024             1
## # i 1 more variable: strikes <int>
```