

Variant Data Vignette

#Variant Data

This data is from <https://github.com/hodcroftlab/covariants/tree/master>. It reports the proportion of cases that are each variant every 2 weeks for the state of Wisconsin. Below there are 2 methods the first shows the proportion of each variant all together and the second shows only variants that are over 50% (i.e. the dominant variants)

```
library(DSIWastewater)
```

```
head(Covariants_data)
```

```
data(Covariants_data, package = "DSIWastewater")
```

```
Covariants_data$category <- row.names(Covariants_data)
```

```
onlycovar <- Covariants_data[-c(1,2)]
```

```
mdfr <- melt(onlycovar, id.vars = "category")
```

```
VariantPercentage <- ggplot(mdfr, aes(factor(category, levels = c(1:69)), value, fill = variable)) +  
  geom_bar(position = "fill", stat = "identity") +  
  scale_y_continuous(labels = percent) +  
  xlab("bi-weekly (2020-08-17 to 2022-12-05)") +  
  ylab("Covariant Percent")
```

VariantPercentage

#Run this for interactive graph

#ggplotly(VariantPercentage)

```
percentages <- mdfr %>%
```

```
  group_by(category) %>%
```

```
  mutate(sum = sum(value), percent = value/sum, majority = case_when(percent > .5 ~ paste(variable)))
```

```
per <- percentages %>% drop_na(majority)
```

```
dates <- Covariants_data[c("week", "category")]
```

```
perDates <- merge(per, dates, by="category")
```

```
ggplot(perDates, aes(x=week, y=percent, color=majority)) +
```

```
  geom_point() +
```

```
  xlab("bi-weekly") +
```

```
  ylab("Percent of total cases (above 50%)") +
```

```
  theme(axis.text.x = element_text(angle = 90, vjust = 0.5, hjust=1))
```