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))
```