---

title: "Varun's Dashboard"

output:

  flexdashboard::flex_dashboard:

    orientation: rows

    vertical_layout: fill

    social: ["twitter", "facebook", "menu"]

    source_code: embed

```{r setup, include=FALSE}
library(flexdashboard)

library(knitr)

library(DT)

library(rpivotTable)

library(ggplot2)

library(plotly)

library(dplyr)

library(openintro)

library(highcharter)

library(ggvis)

library(tidyverse)
```

```{r}
df <- read.csv("honeyproduction.csv")
```

Interactive Data Visualization

=====================================

Row

Honey Production

```{r}
valueBox(paste("Honey Produciton Analysis"),

    color = "orange")
```

Average annual honey production

```{r}
valueBox(paste("1.47 million Pounds"), icon = "fa-user",color = "info")


```

```{r}
mycolors <- c("blue" , '#FFC125' , "darkgreen" , "darkorange")


```

Average Cost

```r
gauge(round(mean(df$priceperlb),

        digits = 3),

        min = 0,

        max = 4.20,

        gaugeSectors(success = c(0, 1.20),

                warning = c(1.20, 2.40),

                danger = c(2.40, 4.20),

                colors = c("green", "yellow", "red")))
```

Total Production in North Dakota 2012

```r
df_ND_2012 = filter(df, df$state == "ND" , df$year == 2012)
valueBox(paste('$',df_ND_2012$totalprod/10000000,'M'),
     icon = "fa-map",color = "blue")
```

Total Production in South Dakota 2012
```r
df_SD_2012 = filter(df, df$state == "SD" , df$year == 2012)
```

```
valueBox(paste('$',df_SD_2012$totalprod/10000000,'M'),

    icon = "fa-map",color = "blue")
```

```
```

Total Production in California 2012
```{r}
df_CA_2012 = filter(df, df$state == "CA" , df$year == 2012)

valueBox(paste('$',df_CA_2012$totalprod/10000000,'M'),

    icon = "fa-map",color = "blue")
```

```
```

Row

Honey Production Industry through years

```{r}
allPlots <- df %>%
  group_by(year) %>%
  mutate(
    colNum.year = mean(numcol),
    colYield.year = mean(yieldpercol),
    totalprod.year = mean(totalprod),
    totalStocks.year = mean(stocks),
    priceperlb.year = mean(priceperlb),
    totalProdValue.year = mean(prodvalue)) %>%
```

```
  select(contains("year")) %>%
  gather(key = "type", value = "value", -year)



label <- c(
  "colNum.year" = "No. of Honey colonies",
  "priceperlb.year" = "Average price per pound",
  "totalProdValue.year" = "Total production",
  "totalStocks.year" = "Total Stocks",
  "totalprod.year" = "Total production (pounds)",
  "colYield.year" = "Honey yield per colony"
)

plot1 <- allPlots %>%
  ggplot(aes(x = year, y = value, group = type, color = type)) +
  geom_line(show.legend = F) +
  facet_wrap(~type, scales = "free_y", labeller = as_labeller(label), shrink = TRUE) +
  geom_vline(xintercept = 2006, color = "red",
        linetype = "dotted", size = 1.3) +
  labs(y = "")

plot1%>% ggplotly()




```

Row

State wise production

```r

state.production <- df %>%

  ggplot(aes(x = year, y = totalprod/1000000, color = state)) +

  geom_smooth(show.legend = T, se = FALSE) +

  labs(title = "Honey Production from 1998 to 2012 by each state") +

  ylab("Total Production in Millions")+

  xlab("Years ")
state.production %>% ggplotly()


```

Stock by State

```r
p3 <- state.production <- df %>%

  ggplot(aes(x = year, y = stocks, color = state)) +

  geom_smooth(show.legend = T, se = FALSE) +

  labs(title = "Honey Stock from 1998 to 2012 by each state") +

  ylab("Stocks of Honey per State")+

  xlab("Years ")
state.production %>% ggplotly()


p3 %>% ggplotly()


```

Maps

==

Map

```{r}
map1 <- df %>%

    group_by(state) %>%

    summarize(total = mean(prodvalue))


map1$state <- abbr2state(map1$state)


highchart() %>%

    hc_title(text = "Honey Production in the USA") %>%

    hc_subtitle(text = "Source: honeyproduction.csv") %>%

    hc_add_series_map(usgeojson, map1,

            name = "state",

            value = "total",

            joinBy = c("woename", "state")) %>%

    hc_mapNavigation(enabled = T)

```

Map

```{r}
map1 <- df %>%

    group_by(state) %>%

    summarize(total = mean(prodvalue))
```

```
map1$state <- abbr2state(map1$state)


highchart() %>%
    hc_title(text = "Honey Production in the USA") %>%
    hc_subtitle(text = "Source: honeyproduction.csv") %>%
    hc_add_series_map(usgeojson, map1,
            name = "state",
            value = "total",
            joinBy = c("woename", "state")) %>%
    hc_mapNavigation(enabled = T)


```
```