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library(dplyr)
library(tidyr)
library(shiny)
library(ggplot2)
frame <- read.csv("complete.csv")
df <- read.csv("complete.csv")
server <- function(input, output, session) {

  df$birth_date <- as.Date(df$birth_date, format = "%Y-%m-%d")
  df <- df%>%
    mutate(birth = as.numeric(format(birth_date, format = "%Y")))%>%
    drop_na(birth, awardYear)%>%
    mutate(age = awardYear - birth)

  output$plot <- renderPlot({
    df1 <- df[df$category %in% input$category,]%>%
      group_by(awardYear)%>%
      mutate(mean = mean(age))

    ggplot(df1, aes(x= awardYear, y = mean))+
      geom_line(color="#f8766d")+
      geom_point(color="#f8766d")+
      labs(title = "Mean age of laureates while receiving awards ",
           x = "Award year", y = "Age", color = "category")+
      xlim(input$slider)+
      theme(text = element_text(size = 15))+
      theme(plot.title = element_text(size = 20))
  })

  output$plot2 <- renderPlot({

    df2 <- frame[frame$birth_continent %in% input$continent,]%>%
      group_by(category, gender)%>%
      summarize(number = n())%>%
      ungroup()

    ggplot(df2, aes(x = category, y = number, fill = factor(gender,
levels=c("male", "female"))))+
      geom_bar(stat='identity')+
      scale_fill_discrete(name = "Laureates", labels = c("male",
"female" ))+
      labs(title = "Nobel Laureates")+
      theme(axis.text.x = element_text(angle = 30, size = 11,
hjust=0.7))+
      theme(text = element_text(size = 15))+
      theme(plot.title = element_text(size = 20))
  })
}

ui <- shinyUI(fluidPage(
  titlePanel("Nobel Laureates Age"),
  sidebarLayout(
    sidebarPanel(
      sliderInput("slider", label = "Select range of years",

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        min = 1900, max = 2020, value = c(1900, 2020)),
checkboxGroupInput("category",
  "Select category:",
  c("Peace" = "Peace",
    "Literature" = "Literature",
    "Physics" = "Physics",
    "Economic Sciences" = "Economic Sciences",
    "Physiology or Medicine" = "Physiology or
Medicine",
    "Chemistry" = "Chemistry"),
  selected = "Peace")),

  mainPanel(
    plotOutput("plot")
  )))

ui2 <- shinyUI(fluidPage(
  titlePanel("Nobel laureates"),
  sidebarLayout(
    sidebarPanel(
      selectInput("continent",
        "Select continent:",
        unique(frame$birth_continent))
    ),
    mainPanel(
      plotOutput("plot2")
    )
  )
))

app_ui <- navbarPage(
  title = "Nobel Prize",
  tabPanel("Nobel Laureates Age", ui),
  tabPanel("Nobel laureates", ui2, icon = icon("database")))

shinyApp(app_ui, server)

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