

## Código R para gerar o gráfico

```
library(readxl)
library(ggplot2)
wine_data <- read_excel("C:/Users/maria/Documents/Tecnico/PE/wine_prod_EU.
  xlsx")
wine_data_clean <- wine_data[!is.na(wine_data$Category) & wine_data$`
  Product Group` != "Non-Vinified", ]
data_2022 <- wine_data_clean[wine_data_clean$Year == 2022, ]
main_countries <- c("France", "Italy", "Spain", "Germany", "Portugal")
data_2022$Country_Grouped <- ifelse(data_2022$`Member State` %in%
  main_countries,
                                data_2022$`Member State`, "Others")
agg_data <- aggregate(Production ~ Country_Grouped + Category, data =
  data_2022, sum, na.rm = TRUE)
plot <- ggplot(agg_data, aes(x = Country_Grouped, y = Production, fill =
  Category)) +
  geom_bar(stat = "identity", position = "dodge") +
  scale_fill_manual(values = c("Other wines" = "#d6caf1",
                                "P.D.O. wines" = "#9885c5",
                                "P.G.I. wines" = "#4a4596",
                                "Varietal" = "#493389"))+
  labs(title = "Wine Production by Category and Country in 2022",
       x = "Country",
       y = "Production (103 hL)",
       fill = "Category") +
  theme_minimal() +
  theme(plot.title = element_text(hjust = 0.5))
pdf("wine_production_result.pdf", width = 8.27, height = 6.0)
print(plot)
dev.off()
```

## Gráfico gerado

