ANALYSING AGE-WISEDISTRIBUTIONOF A POPULATION USING R

**Source Code:**

library(shiny)

library(ggplot2)

library(colourpicker)

ui <- fluidPage(

tags$head(

tags$style(HTML("

body {

background-color: #f4f6f7;

font-family: 'Segoe UI', sans-serif;

}

.title-panel h2 {

text-align: center;

color: #2c3e50;

font-weight: bold;

margin-top: 20px;

margin-bottom: 30px;

}

.well {

background-color: #ffffff;

border-radius: 12px;

box-shadow: 0 0 20px rgba(0, 0, 0, 0.05);

padding: 30px;

}

.footer {

text-align: center;

color: #7f8c8d;

font-size: 14px;

margin-top: 20px;

padding-bottom: 10px;

}

.custom-controls {

display: flex;

flex-wrap: wrap;

justify-content: space-between;

gap: 20px;

}

.custom-controls .form-group {

flex: 1;

min-width: 220px;

}

"))

),

div(class = "title-panel",

h2("📊 Age-wise Population Distribution")

),

fluidRow(

column(width = 10, offset = 1,

wellPanel(

div(class = "custom-controls",

fileInput("file", "Upload CSV File", accept = ".csv"),

colourInput("barColor", "Select Bar Color", value = "#0073C2"),

selectInput("plotType", "Plot Type", choices = c("Bar Chart", "Pie Chart"))

),

plotOutput("populationPlot", height = "600px"),

br(),

downloadButton("downloadPlot", "Download Plot")

)

)

),

div(class = "footer",

HTML("© 2025 by Mukesh • Built with ❤ using Shiny")

)

)

server <- function(input, output, session) {

population\_data <- reactive({

req(input$file)

df <- read.csv(input$file$datapath)

validate(

need(all(c("Age\_Group", "Population") %in% colnames(df)),

"CSV must contain 'Age\_Group' and 'Population' columns.")

)

df$Age\_Group <- factor(df$Age\_Group, levels = unique(df$Age\_Group))

return(df)

})

output$populationPlot <- renderPlot({

req(population\_data())

df <- population\_data()

if (input$plotType == "Bar Chart") {

ggplot(df, aes(x = Age\_Group, y = Population, fill = Age\_Group)) +

geom\_bar(stat = "identity", show.legend = FALSE, fill = input$barColor) +

labs(title = "Age-wise Population Distribution", x = "Age Group", y = "Population") +

theme\_minimal() +

theme(

plot.title = element\_text(hjust = 0.5, face = "bold", size = 16),

axis.text.x = element\_text(angle = 45, hjust = 1)

)

} else {

ggplot(df, aes(x = "", y = Population, fill = Age\_Group)) +

geom\_bar(width = 1, stat = "identity") +

coord\_polar("y", start = 0) +

labs(title = "Age-wise Population (Pie Chart)", x = NULL, y = NULL) +

theme\_void() +

theme(plot.title = element\_text(hjust = 0.5, face = "bold", size = 16))

}

})

output$downloadPlot <- downloadHandler(

filename = function() {

paste("Age\_Wise\_Population", Sys.Date(), ".png", sep = "")

},

content = function(file) {

ggsave(file, plot = last\_plot(), device = "png", width = 10, height = 8)

}

)

}

shinyApp(ui = ui, server = server)