Armed Force Data Report

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Load required packages

library(tidyverse) library(janitor)

Step 1: Read Data

armed_raw <- read.csv("US_Armed_Force_Data.csv")

Step 2: Clean names for consistency

armed_clean <- armed_raw clean_names()

Step 3: Reshape from wide to long format

armed_long <- armed_clean pivot_longer(cols = -pay_grade, names_to = c("branch", "sex"), names_sep = "\.") mutate(count = as.numeric(gsub(",", "", value)), # remove commas and convert to numeric branch = str_replace_all(branch,"_"," "), sex = str_to_title(sex)) %>% select(pay_grade, branch, sex, count)

Step 4: Filter to a valid subgroup

army_enlisted <- armed_long filter(branch == "Army", str_detect(pay_grade, "^E"))

Step 5: Create a two-way frequency table

freq_table <- army_enlisted group_by(pay_grade, sex) summarise(total = sum(count, na.rm = TRUE)) pivot_wider(names_from = sex, values_from = total, values_fill = 0) # Filter data for Army Enlisted only

Step 6: Two Way Frequency Table army_enlisted <- combined_armed_data %>% filter(branch_name == "Army", rank_name %in% c("Private", "Corporal", "Sergeant"))

freq_table <- table(army_enlisted$sex, army_enlisted$rank_name)

Step 7: View results

print(freq_table)