

Pearson Correlation Coefficient

Code and Output

Pearson correlation test between life expectancy and income

```
> # Pearson Correlation Test for income and life expectancy
>
> cor_test_income_life <- cor.test(income_vs_life_expectancy_in_2010$Income_per_person, income_vs_life_expectancy_in_2010$Life_Expectancy, method="pearson")
> cor_test_income_life

Pearson's product-moment correlation

data: income_vs_life_expectancy_in_2010$Income_per_person and income_vs_life_expectancy_in_2010$Life_Expectancy
t = 9.4279, df = 176, p-value < 2.2e-16
alternative hypothesis: true correlation is not equal to 0
95 percent confidence interval:
 0.4724467 0.6693332
sample estimates:
      cor
0.5792776
```

Pearson correlation test between life expectancy and total health spending

```
> # Pearson Correlation Test for life expectancy and total health spending
>
> cor_test_life_tothealthspend <- cor.test(life_total_gov_spend_in_2010$Total_Health_Spending_Per_Person, life_total_gov_spend_in_2010$Life_Expectancy, method="pearson")
> cor_test_life_tothealthspend

Pearson's product-moment correlation

data: life_total_gov_spend_in_2010$Total_Health_Spending_Per_Person and life_total_gov_spend_in_2010$Life_Expectancy
t = 8.4888, df = 175, p-value = 8.635e-15
alternative hypothesis: true correlation is not equal to 0
95 percent confidence interval:
 0.4265415 0.6368344
sample estimates:
      cor
0.5400639
```

Pearson correlation test between life expectancy and government health spending

```
> # Pearson Correlation Test for life expectancy and government health spending
>
> cor_test_life_govhealthspend <- cor.test(life_total_gov_spend_in_2010$Government_Health_Spending_Per_Person, life_total_gov_spend_in_2010$Life_Expectancy, method="pearson")
> cor_test_life_govhealthspend

Pearson's product-moment correlation

data: life_total_gov_spend_in_2010$Government_Health_Spending_Per_Person and life_total_gov_spend_in_2010$Life_Expectancy
t = 8.1521, df = 175, p-value = 6.625e-14
alternative hypothesis: true correlation is not equal to 0
95 percent confidence interval:
 0.4087546 0.6238503
sample estimates:
      cor
0.5246248
```

Pearson correlation test between life expectancy and improved drinking water source

```
> # Pearson Correlation Test for life expectancy and improved drinking water
>
> cor_test_life_water <- cor.test(life_water_in_2007$Improved_water, life_water_in_2007$Life_Expectancy, method="pearson")
> cor_test_life_water

Pearson's product-moment correlation

data: life_water_in_2007$Improved_water and life_water_in_2007$Life_Expectancy
t = 14.766, df = 174, p-value < 2.2e-16
alternative hypothesis: true correlation is not equal to 0
95 percent confidence interval:
 0.6719665 0.8048903
sample estimates:
      cor
0.74576
```

Pearson correlation test between life expectancy and food supply

```
> # Pearson Correlation Test for life expectancy and food supply
>
> cor_test_life_food <- cor.test(life_food_in_2007$Food_Supply, life_food_in_2007$Life_Expectancy, method="pearson")
> cor_test_life_food

Pearson's product-moment correlation

data: life_food_in_2007$Food_Supply and life_food_in_2007$Life_Expectancy
t = 12.218, df = 173, p-value < 2.2e-16
alternative hypothesis: true correlation is not equal to 0
95 percent confidence interval:
 0.5920266 0.7529240
sample estimates:
      cor
0.6805975
```

Pearson correlation test between life expectancy and total cancer death

```
> # Pearson correlation test for life expectancy and total cancer death
>
> cor_test_life_totc <- cor.test(total_cancer_death_2002$All_Cancer_Death, total_cancer_death_2002$Life_Expectancy, method="pearson")
> cor_test_life_totc

Pearson's product-moment correlation

data: total_cancer_death_2002$All_Cancer_Death and total_cancer_death_2002$Life_Expectancy
t = -0.28691, df = 147, p-value = 0.7746
alternative hypothesis: true correlation is not equal to 0
95 percent confidence interval:
-0.1837586 0.1376659
sample estimates:
      cor
-0.02365772
```