

Hint: use the values return by the linregress function.

Submit both the codes and figure via PandA by next lecture:

```
from scipy import stats
import numpy as np
import matplotlib.pyplot as plt

daily_cig_smoked = np.array([36, 14, 18, 35, 14, 33, 2, 6, 14, 29,
                             21, 30, 0, 27, 16, 16, 29, 2, 23, 16,
                             18, 14, 4, 32, 30, 25, 14, 20, 25, 21])
age_of_death = np.array([69.6, 92.4, 75.7, 68, 77.1, 69.6, 94.1, 91.3, 87.1, 78.4,
                        75.3, 66.5, 88.1, 77.2, 76.9, 86.7, 70.5, 94.2, 74.5, 71.1,
                        78.7, 78.6, 89.4, 65.5, 69.2, 78, 80.3, 77.4, 78.1, 74.9])

slope, intercept, r, p, stderr = stats.linregress(daily_cig_smoked, age_of_death)

x_vals = np.linspace(0, 40, 100)
y_vals = intercept + slope * x_vals

plt.figure(figsize=(8,5))
plt.plot(daily_cig_smoked, age_of_death, "o", label="Data points")
plt.plot(x_vals, y_vals, "r--", label=f"Regression line\ny = {intercept:.2f} + {slope:.2f}x")
plt.xlabel("Daily Cigarettes")
plt.ylabel("Age of Death")
plt.title("Linear Regression using scipy.stats.linregress")
plt.legend()
plt.grid(True)
plt.show()
```



Linear Regression using scipy.stats.linregress

