



جامعة المستقبل
AL MUSTAQBAL UNIVERSITY

جامعة المستقبل
كلية العلوم – قسم الأنظمة الطبية الذكية

Lecture: (1)

Subject: Statistics and probability

Class: Second

Lecturer: Prof. Dr. Mehdi Ebady Manaa

Example

Simple Statistical Analysis fo sample of data

Objective: to Perform a statistical study to analyze some sample data

```
import numpy as np
```

```
# Step 1: Sample patient weight data (in kilograms)
weights = [65, 72, 78, 85, 90, 55, 60, 75, 80, 70]
```

```
# Step 2: Calculate basic statistics
mean_weight = np.mean(weights) # Average weight
median_weight = np.median(weights) # Middle value
std_dev_weight = np.std(weights) # Standard deviation
min_weight = np.min(weights) # Minimum weight
max_weight = np.max(weights) # Maximum weight
```

```
# Step 3: Print the results
print(f"Mean Weight: {mean_weight:.2f} kg")
print(f"Median Weight: {median_weight:.2f} kg")
print(f"Standard Deviation: {std_dev_weight:.2f} kg")
print(f"Minimum Weight: {min_weight} kg")
print(f"Maximum Weight: {max_weight} kg")
```