

1. Hospital Department Efficiency

Question:

You are analyzing the performance of 4 hospital departments. Each department has a different combination of medical staff and beds.

You want to know: *Which department is most efficient in treating patients with limited resources?*

- **Inputs:**

- Doctors: [40, 35, 45, 38]
- Nurses: [80, 70, 85, 75]
- Beds: [150, 140, 160, 145]

- **Outputs:**

- Patients treated: [2000, 1900, 2100, 1950]
- Survival rate: [0.97, 0.96, 0.98, 0.95]

2. Retail Store Efficiency

Question:

A retail company wants to assess whether its 4 branches are efficiently turning staff and marketing investment into profit.

Which store branch is the best performer given similar resource levels?

- **Inputs:**

- Marketing Spend (USD): [\$12,000, \$10,000, \$11,500, \$9,800]
- Employees: [20, 18, 22, 19]

- **Outputs:**

- Monthly Revenue (USD): [\$110,000, \$100,000, \$120,000, \$95,000]
- Number of Customers: [2,300, 2,000, 2,600, 1,900]

3. School Performance Evaluation

Question:

A school district monitors 4 schools to find out which one is using its resources most efficiently to produce better academic results.

- **Inputs:**

- Teachers: [30, 25, 20, 28]
- Annual Budget (USD): [\$800,000, \$750,000, \$700,000, \$770,000]

- **Outputs:**

- Graduation Rate (%): [85, 90, 82, 88]
- Average Test Score (out of 100): [78, 80, 76, 79]