

## **0.1 Matrix rank**

### **0.1.1 Rank function**

The rank of a matrix is the dimension of the span of its component columns.

$$\text{rank}(M) = \text{span}(m_1, m_2, \dots, m_n)$$

### **0.1.2 Column and row span**

The span of the rows is the same as the span of the columns.