

The dataset of 8100 chest X-ray images was shuffled using a fixed random seed (e.g., 42) and split into **training (80%, 6480 images)**, **validation (10% of training, 648 images)**, and **test (20%, 1620 images)** sets. This process is illustrated in Figure 1, ensuring reproducibility and proper model evaluation.

Table 1: Distribution of chest X-ray images by type

Type	No.'s of X-ray images
Normal	3605
Pneumonia	4495
Total	8100

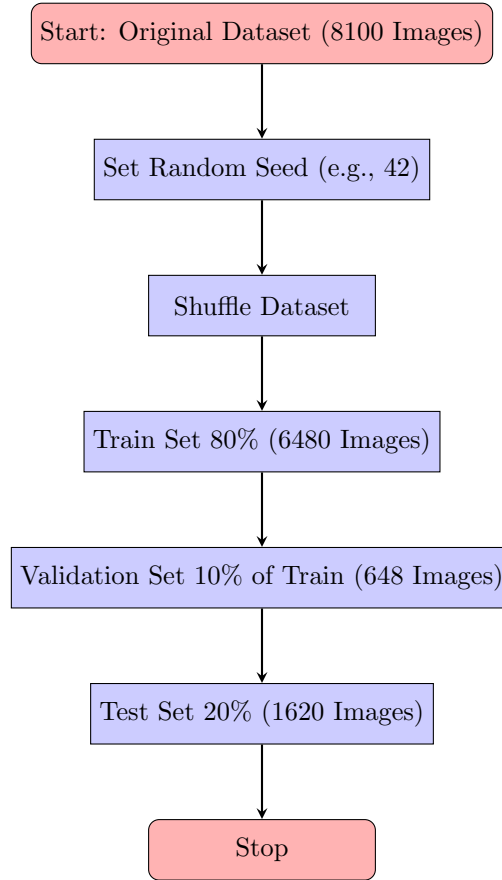


Figure 1: Flow diagram of dataset splitting into training, validation, and test sets with a fixed random seed for reproducibility.