

## **Workshop Title:**

Probability and Applications of ML hands on workshop

## **Workshop Date:**

June 10 2025

Welcome to the "Probability and Applications of ML hands within the Data Science track of the ABRHS Research Club.

# **Workshop Objective:**

Hands on tutorial session focused on probabilities and their applications for Data Science

## **Workshop Outline:**

#### Concepts:

- 1. Probabilities and Random Variables
  - Concept 1: Real Life Examples
  - Concept 2: What is a Random Variable?
  - Concept 3: Vocabulary Stochastic vs Deterministic
  - Concept 4: PDF vs CDF
- 2. Normal Distributions
  - Concept 1: What is the Exponential Function?
  - Concept 2: The Normal Distribution
- 3. Kolmogorov–Smirnov
  - Concept 1: Understanding the Kolmogorov-Smirnov (KS) test.
  - Concept 2: Applications of KS: how do you know if your medicine works?