

# GIS for Epidemiology

**Day 2 of Geospatial Technology for Public Health Policy Workshop May 27–29, 2024 — GISE Hub, IIT Bombay@Central University Gujarat (CUG), Gandhinagar**

Prof. (Dr.) Biju Soman

Dr. Arun Mitra

2024-05-28

## Welcome

- Welcome to the Day 2 of **Geospatial Technology for Public Health Policy Workshop!**
- The goal for today is to highlight the applications of GIS in Epidemiology while providing the foundational concepts in Spatial Epidemiology.
- The workshop introduces the participants to the field of Spatial Data Science through the statistical programming language R.
- The workshop is intended as an introductory window into the world of spatial data analysis and visualization for public health policy.
- Workshop materials in the github repository [GIS4EPI-Workshop](#)

## Learning Objectives for the Workshop

At the end of the day, participants will be able to:

- Understand and Apply Foundational Concepts in Spatial Epidemiology
- Utilize Tools and Techniques for Spatial Data Analysis and Spatial Data Science
- Implement Best Practices for Reproducible Spatial Data Research and Analysis
- Analyze and Interpret Spatial Data for Public Health Applications
- Explore the applications of spatial epidemiology in public health research and practice
- Gain hands-on experience with spatial data analysis and visualization

## Schedule

Time	Session	Topic
10:00 - 10:50	Session 1a	<a href="#">Foundational Concepts in Spatial Epidemiology</a>
		<i>Bio-Break</i>
11:00 - 11:50	Session 1b	<a href="#">Introduction to Spatial Data Science using R</a>
		<i>Bio-Break</i>
12:00 - 12:50	Session 1c	<a href="#">Investigating an Outbreak: Applications of Spatial Epidemiology</a>
		<i>Lunch</i>
14:00 - 14:50	Session 2a	<a href="#">Spatial Data Visualization: Principles and Best Practices</a>
		<i>Bio-Break</i>
15:00 - 15:50	Session 2b	<a href="#">Case Studies: Spatial Data Analysis and Visualization</a>
		<i>Bio-Break</i>
16:00 - 16:50	Session 2c	<a href="#">Hands-on Exercises</a>
16:50 - 17:00		<i>Q&amp;A Session</i>

## In preparation for the workshop

Participants are required to go through the [workshop pre-requisites](#) before the commencement of the workshop. This document provides a brief overview of the requisite concepts and provides a step-by-step tutorial on how to install the tools required for the workshop.