

WEEK 01

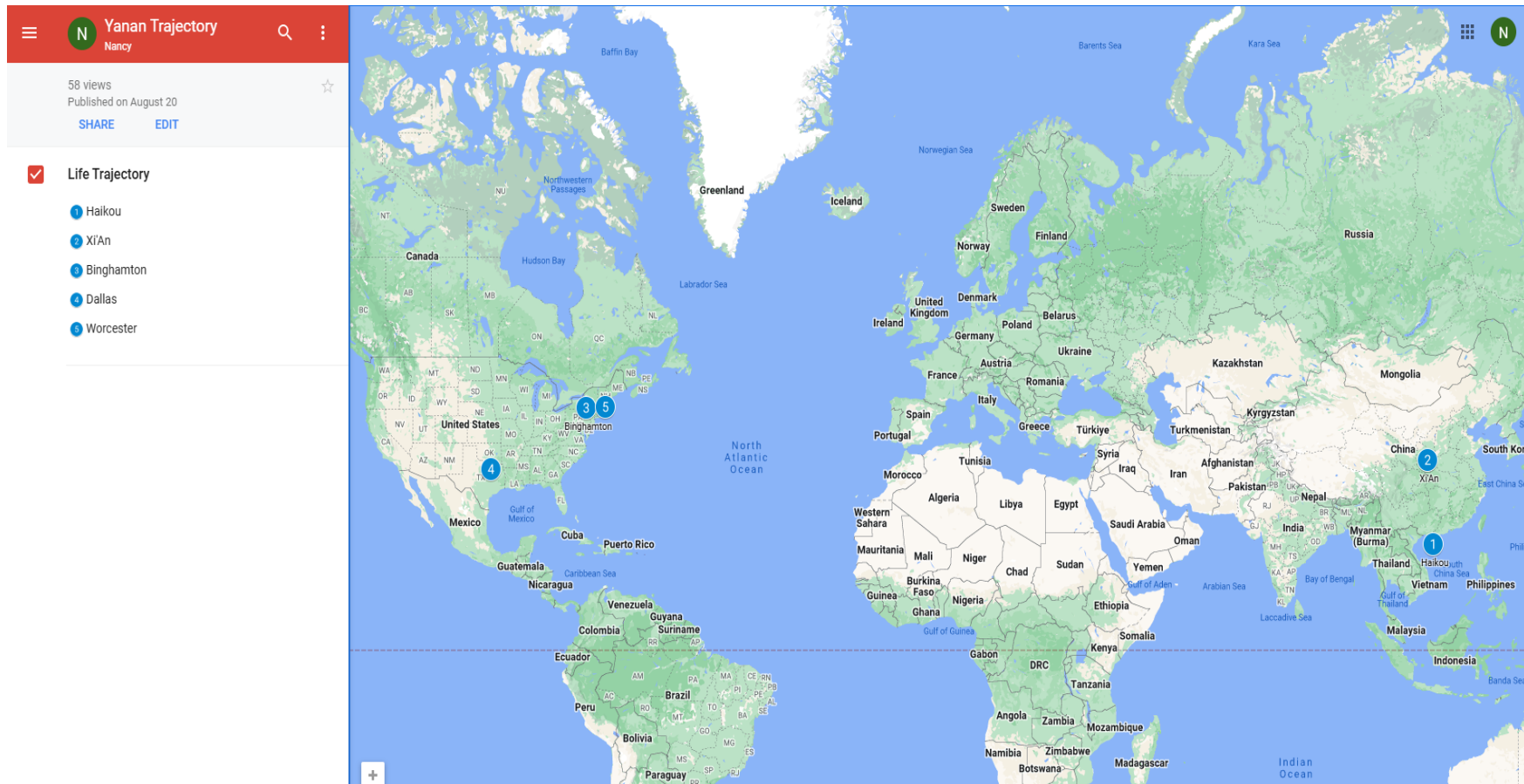
Instructor: Yanan Wu

TA: Vanchy Li

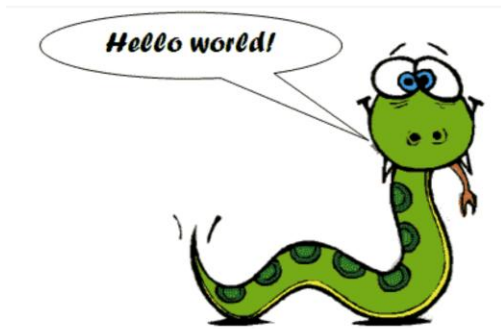
Spring 2025

YANAN WU – VISITING ASSISTANT PROFESSOR

■ Education & Experience



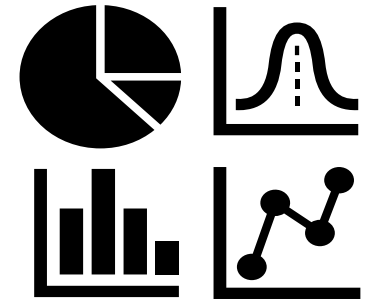
• Python Programming



• Spatial Database



• Intermediate Statistics



1. Manipulating Spatial Data
2. Web Mapping
3. Processing Raster
4. Data Analysis
5. Creating Custom Tool
6. Data Visualization
7. ...

1. Geodatabase
2. SQL
3. Proximity Analysis
4. Geometry processing
5. Raster processing
6. PostSQL with python
7. ...

1. Bivariate regression
2. Logistics regression
3. PCA
4. GWR
5. Spatial Autocorrelation
6. ...



INSTRUCTOR OFFICE HOUR

- Tuesday & Thursday
1:30 pm – 2:30 pm Or By appointment
- Office Location: Jeff 220

TA INTRODUCTION

- Office Hours: 1: 00 – 3:00 PM on Monday
- Office Location: EROS, the first floor of the Geography Building.

HOW ABOUT YOU?

- Your background (e.g., name, major, where you come from)
- What is your funniest thing that happened during your winter break?
- What relevant experience do you have with spatial database?
- What are your expectations for this course?

COURSE FORMAT

- Lectures: Instructor & TA

- Location:

- 10:25 – 11:40 on Monday, Physics/Math BP310

- 14:50 – 16:40 on Tuesday, Jonas Clark Hall JC105

- Labs: TA

- Location: Physics/Math BP310

- Time: 10:25 – 11:40 on Friday

LEARNING RESOURCE

- [Introduction to PostGIS](#)
- [Welcome to PostGIS Book](#)
- [Other Training Materials](#)
- [Official Manual about PostGIS](#)
- Obe, R., & Hsu, L. S. (2021). [PostGIS in action](#). Simon and Schuster.

COURSE REQUIREMENTS

- Labs: 9 labs in total

For any graded assignment, if the you do not agree with the grade received, the instructor and TA must be notified within one week after the assignment is graded.

- Late policy for lab
- Final project (oral presentation and paper report)

GRADE

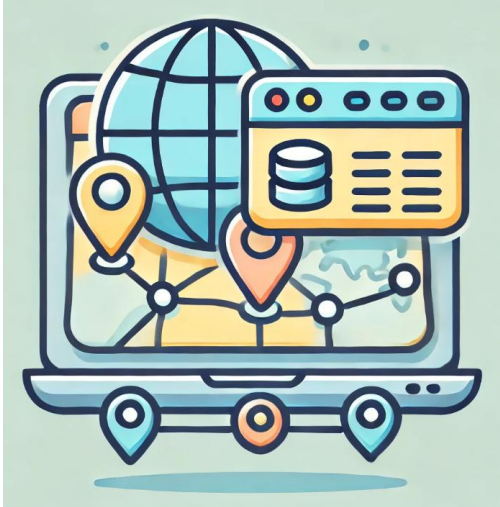
- Assignments 80% = nine labs
- Final Project 20% = 15% oral + 5% written

A (93.0 to 100.0)	B (83.0 to 86.9)	C (73.0 to 76.9)	D (63.0 to 66.9)
A- (90.0 to 92.9)	B- (80.0 to 82.9)	C- (70.0 to 72.9)	D- (60.0 to 62.9)
B+ (87.0 to 89.9)	C+ (77.0 to 77.9)	D+ (67.0 to 69.9)	F (0.0 to 59.9)

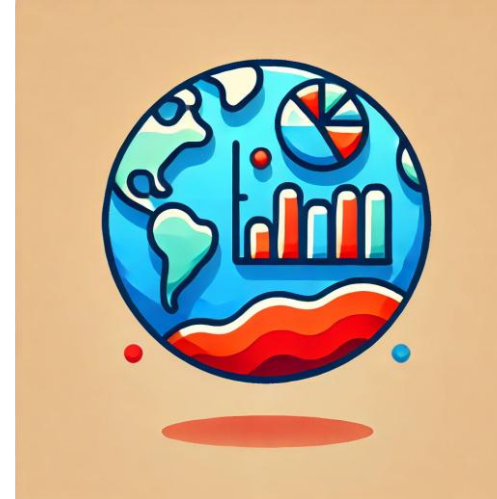
IMPORTANT DATES

- **Jan 22.** Add/Drop ends (& last day to request audit) Full Semester
- No class
 - Jan 20. University holiday
 - Feb 17. Wellness day
 - March 3-7 Spring Break
 - March 24-27 AAG Conference
- Final project
 - April 14-24 Working on final project
 - April 28 – May 1 Final project presentation
 - May 5 Final report due

COURSE WEBSITES ON GITHUB



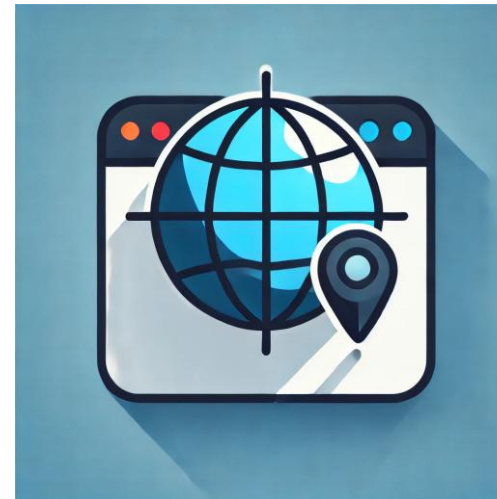
■ [Spatial Database](#)



■ [Intermediate Statistics](#)



■ [Python Programming](#)



■ [Web Mapping](#)



GIS HELP DESK

NEW SPRING 2025 HOURS:

Need help with GIS? Can't make it to visit your professor or TA for office hours? Stop by our GIS Help Desk in the Jefferson Tower (6th floor), or in Jefferson 220A (2nd floor Jefferson building, Geog Main office) on Wednesdays, and visit one of our Help Desk Assistants!

MONDAYS

SASHA 9 AM - 11 AM

TUESDAYS

SASHA 9 AM - 12 PM

WEDNESDAYS @ JF220A

SASHA 9 AM - 12 PM

WYNNIE 2 PM - 5 PM

THURSDAYS

WYNNIE 2 PM - 5 PM

FRIDAYS

WYNNIE 3 PM - 5 PM

GIS Help Desk hours follow a University schedule. If the University is closed from remote/online operations for any reason, the GIS Help Desk may also be unavailable. GIS Help Desk Assistants operate on a first-come, first-serve drop-in basis. Contact Marjorie Miller (marmiller@clarku.edu) with any questions, or call the Geography Main Office at 508-793-7336 for more information. The GIS Help Desk is sponsored by the Graduate School of Geography at Clark University.

SPRING 2025 HOURS

GIS HELP DESK

Please contact either of our GIS Help Desk Assistants during their specified hours for more information.

SASHA GANNON | GEOG '24 MS-GIS '25



MONDAYS 9AM – 11AM

TUESDAYS 9AM – 12PM

WEDNESDAYS* 9AM – 12PM

WYNNIE GROSS | GEOG '24 MS-GIS '25



WEDNESDAYS*

3PM – 5PM

THURSDAYS

2PM – 5PM

FRIDAYS

3PM – 5PM

Help Desk hours follow a University schedule. If the University is closed (or if the Geography office is closed), the GIS Help Desk will be unavailable. Hours may be limited or extended during midterms/final exams. Any changes will be announced or posted on the Clark University Geography Facebook page. Appointments operate on a first-come, first-serve drop-in basis unless otherwise scheduled.

**508.793.7336 | JEFFERSON TOWER, 6TH FLOOR; *WEDNESDAYS ARE IN JEFFERSON 220A, GEOG
MAIN OFFICE, JEFFERSON BUILDING, 2ND FLOOR***



WEEK 01

LECTURE SESSION

Instructor: Yanan Wu

TA: Vanchy Li

Spring 2025

A grayscale photograph of two elephants in a savanna setting, with one elephant in the foreground and another slightly behind it. The background is filled with dense, dark foliage.

PostgreSQL: The World's Most Advanced Open Source Relational Database

Download →

New to PostgreSQL?

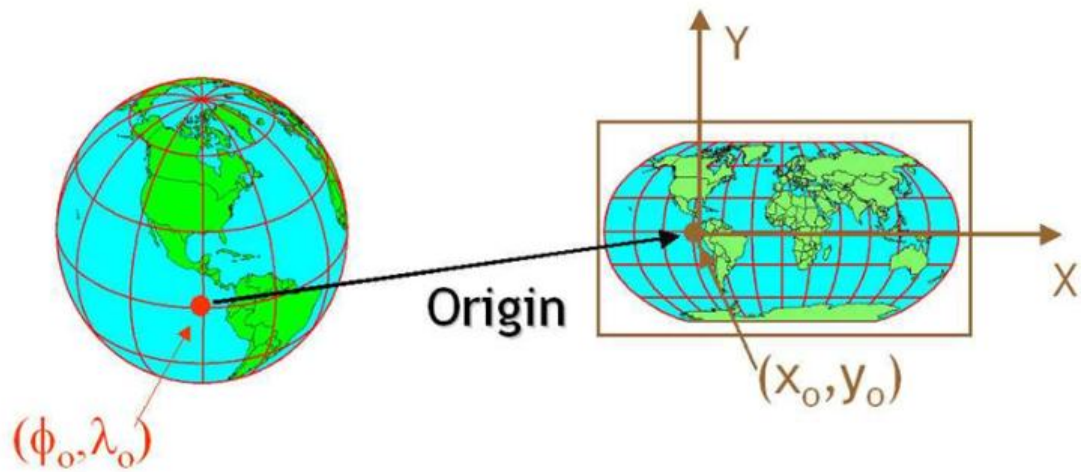
WEEK 01

- Introduction to the Course
- Software Installation
 - PostgreSQL: [The world's most advanced open source database](#)
 - PostGIS: [About PostGIS](#)

WEEK 02

- Introduction to the PostGIS, PostgreSQL, and pgAdmin
 - Basic operations in [pgAdmin](#)
 - Introducing PostGIS
 - Introduction to psql





WEEK 03

- Spatial data and geodatabases
 - Spatial data types
 - Spatial reference systems
 - Working with real data

WEEK 04

- Introduction to SQL (*It is pronounced as “Escuel”, but most often you can hear the slang “Sequel”.*)
 - Simple SQL
 - a) SELECT
 - b) INSERT
 - c) UPDATE
 - d) DELETE
 - Working with spatial data



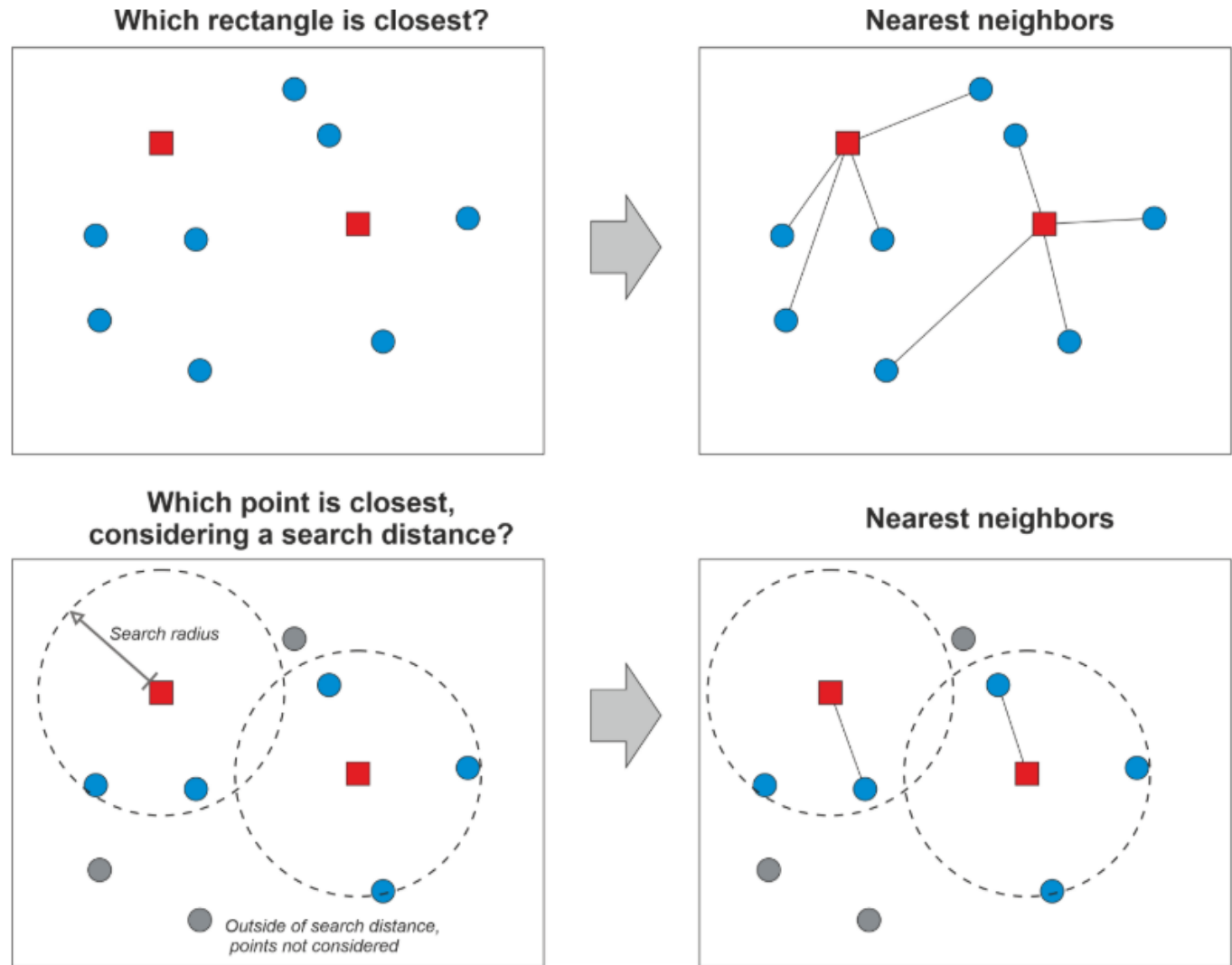
WEEK 05

- Complex Queries and Database Management
- Combine Information
- Write Queries to run faster and use less data



WEEK 06 & WEEK 07

- Proximity Analysis
- Nearest Neighbor Search



WEEK 08

- No Class Meeting
- Spring Break

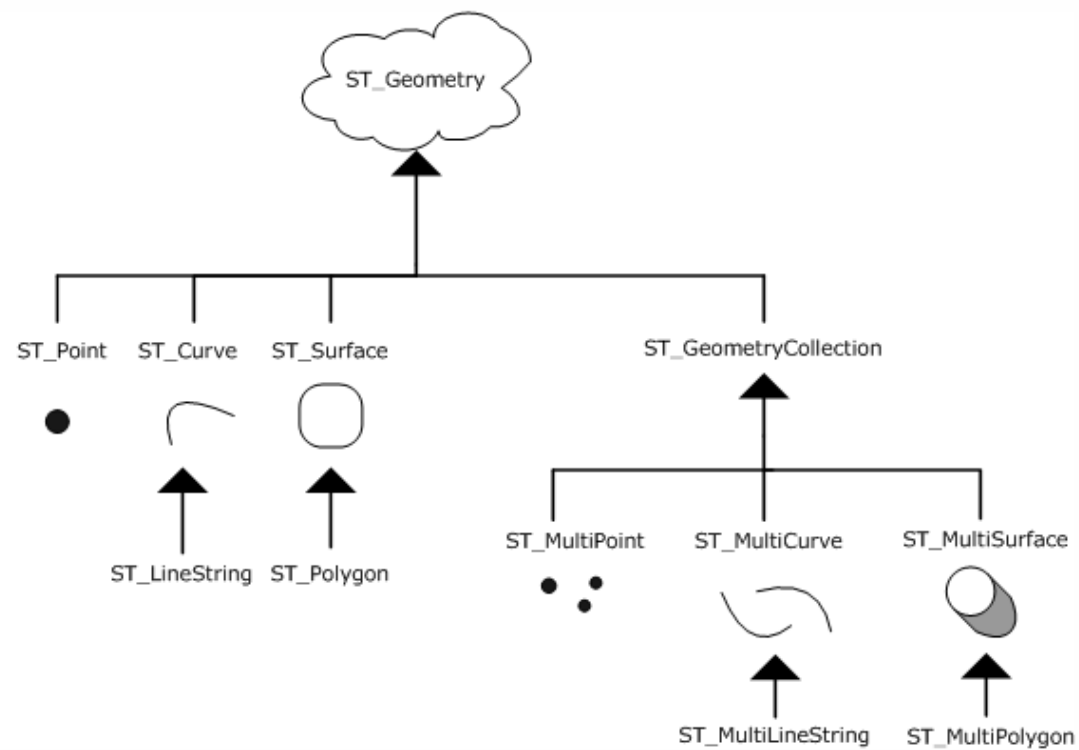


WEEK 09

GEOMETRY PROCESSING

SUPERCLASS

SUBCLASSES



WEEK 10

Raster Processing

Raster output

Raster Accessors and setters

Reclassing functions

WEEK 11

Where Geography Comes Together

ABOUT US

For the future of geography, we are better together

Your support of the discipline is the reason we can do so much. Consider a donation to one of AAG's targeted funds, or to the area of greatest need.

MAKE A DIFFERENCE [➤](#)

WEEK 12

POSTGRESQL AND ARCGIS OR QGIS



PostgreSQL



ArcGIS® Pro

WEEK 13

- PostGIS with Python



WEEK 14

- PostGIS in Web Application

