

# Data Structure

**CS 284 C**

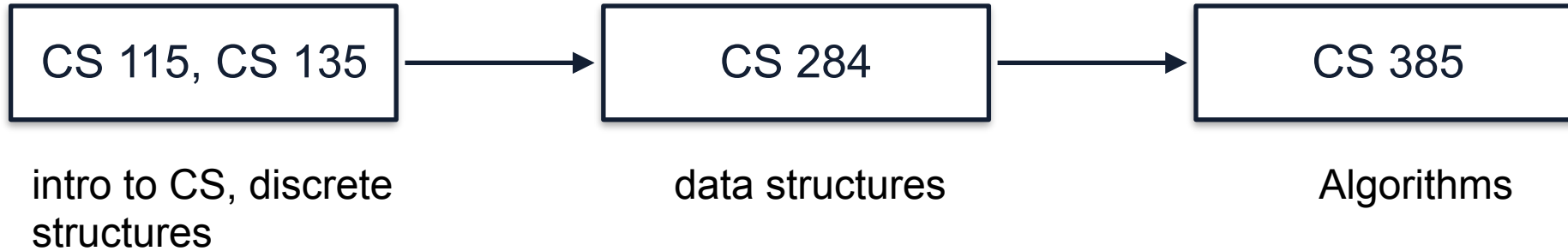
**Instructor: Susan Liu**

**[xueqing.liu@stevens.edu](mailto:xueqing.liu@stevens.edu)**

# Welcome to CS284

- **Instructor:** Susan (Xueqing) Liu
- **Email:** [xliu127@stevens.edu](mailto:xliu127@stevens.edu)
- **CAs:**
  - Revathy Ramasundaram [rramasun@stevens.edu](mailto:rramasun@stevens.edu)
  - Joshua N. Schmidt [jschmid3@stevens.edu](mailto:jschmid3@stevens.edu)
  - Bhagyesh Patel [bpatel91@stevens.edu](mailto:bpatel91@stevens.edu)

# What is Data Structure?



- How many have taken CS 115? CS 135?
- Familiar with Python?
- Familiar with Java?

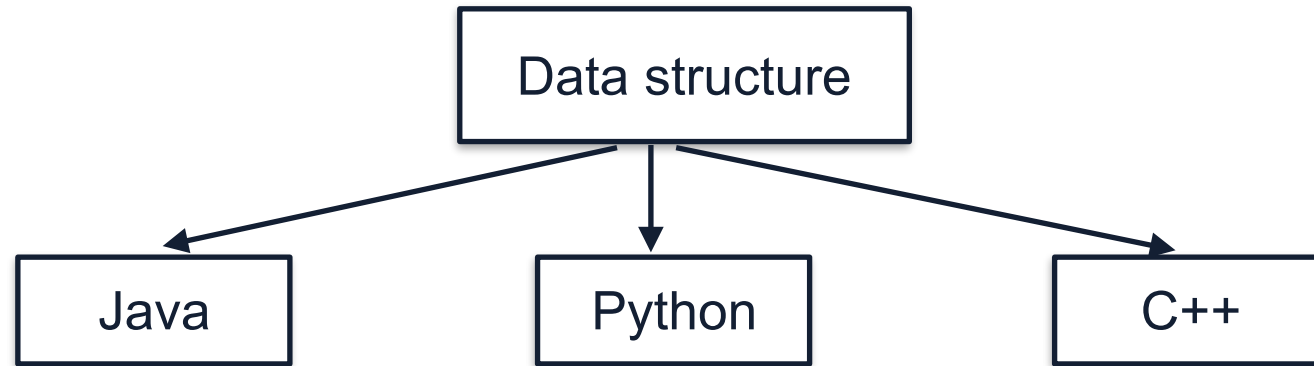
# What is Data Structure?

- Data structures are ways to **organize** information in a computer memory, making it efficient to **store**, **update** and **retrieve** information
- By the end of this semester, you will
  - Have a general understanding on data structure, OOP, algorithm efficiency
  - Solve many LeetCode - **Medium** and some LeetCode - **Hard** problems

# Overview of CS 284

- Java basic
- Abstract data type
- Object-oriented programming
- Software life cycle
- Algorithm complexity
- big-O notation
- Collections, list, stack, queue
- Trees
- Sets and Maps
- ...

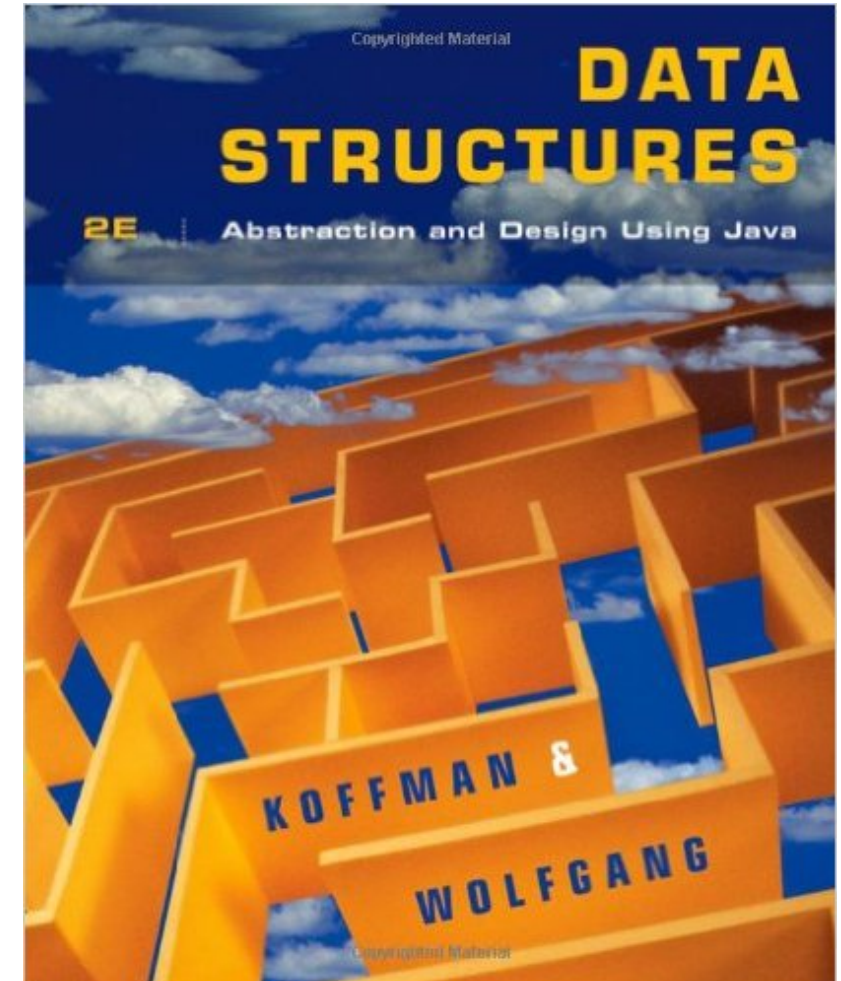
# Learning Data Structure **using** Java



- Advantage using Java
  - Popular for building industry systems, e.g., Android
  - Good teaching example for object-oriented programming

# Textbook

- Data structures, Koffman and Wolfgang 2010
- [http://www.r-5.org/files/books/computers/ algo-list/test-dev/ Elliot\\_B\\_Koffman\\_Paul\\_A\\_T\\_Wolfgang- Data\\_Structures-EN.pdf](http://www.r-5.org/files/books/computers/algo-list/test-dev/Elliot_B_Koffman_Paul_A_T_Wolfgang-Data_Structures-EN.pdf)



# Questions



- Susan's office hour: 1:30 - 3:30 Wed (starting Jan 29)
- CAs' office hours:
  - Joshua: Mon 1-2
  - Revathy: Wed 4-5
  - Bhagyesh: Mon 1-2
- Office hours > ~~Piazza~~ > email

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Selected Term: Spring 2020

Spring 2020

**Class 1:** CS 204 C: Data Structures (edit)  
Instructors: Susan Liu · 1 Enrolled

✓ Join as:  Student  TA  Professor



# Final Grade Calculator

- Homework (30%)
- In-class quiz (10%)
- Midterm (20%)
- Endterm (20%)
- Final (20%)

# Homework

- 5 HWs, 1st HW due on Feb 12 11:59pm
- **Late policy:**
  - < 24 hours - 90%, < 48 hours - 70%, > 48 hours - 0 point
  - Sick/Emergency - email
- Mostly coding problems
  - 0 point if not compile
  - 0 point if plagiarism is detected

# In-class Quizzes

- 10 in-class quizzes, the day(s) of quiz is not certain
- You can have 2 absence
- Your final score for quiz is the average over the 8 highest scores

# Exams and Recitations

- Three exams
  - Midterm - first half semester (Week 8)
  - Endterm - second half semester (Week 15)
  - Final - entire semester (Week 16)
- Recitations
  - Every Friday
  - Taught by CAs