Class Structure
Class components

Lectures 2 per week 29 total
Quizzes 2 per week 29 total
Homework 1 per week 14 total
Laboratory/Discussion 1 per week 13 total

Attend your own section!
Exams 6 total
Grading

LECTURES 20%
QUizzes 12%
LABS 24%
EXAMS 20%
HOMEWORK 24%
Supporting items

from numpy import *
from ODESolver import RungeKutta4
def risk(u, t):
    R = 1
    return alpha**u*(1 - u/R)

\[
\frac{du}{dt} = \alpha \left( 1 - \frac{u}{R} \right)
\]

\[
u(0) = 0.1
\]

\[
R = 1
\]

\[
\alpha = 0.2
\]
Lecture attendance is recorded starting Mon, Jan 29
No laptops!
The story thus far...
Calculation
Elements of Computation

- **Calculation**—mathematics, physics, [universal] language, etc.
Elements of Computation

- **Calculation**—mathematics, physics, [universal] language, etc.
- **Storage**
Elements of Computation

- **Calculation**—mathematics, physics, [universal] language, etc.
- **Storage**—punch cards, tape, drives, RAM
Elements of Computation

- **Calculation**—mathematics, physics, [universal] language, etc.
- **Storage**—punch cards, tape, drives, RAM
- **Control**
Elements of Computation

- **Calculation**—mathematics, physics, [universal] language, etc.
- **Storage**—punch cards, tape, drives, RAM
- **Control**—punch cards, gears, vacuum tubes, transistors
Elements of Computation

- **Calculation**—mathematics, physics, [universal] language, etc.
- **Storage**—punch cards, tape, drives, RAM
- **Control**—punch cards, gears, vacuum tubes, transistors
- **Communication**
Elements of Computation

- **Calculation**—mathematics, physics, [universal] language, etc.
- **Storage**—punch cards, tape, drives, RAM
- **Control**—punch cards, gears, vacuum tubes, transistors
- **Communication**—telephone lines, network
Computing Stack

The story thus far...
Computational thinking
Maze Algorithms
Maze Algorithms
Maze Algorithms

Computational thinking
Maze Algorithms

Computational thinking
Maze Algorithms

THE RING PATTERNS MATCH AND OVERLAP BACK INTO TIME

A THIS WAS A LIVING TREE WHEN CUT BY US

B THIS BEAM CAME FROM A HOUSE

C THIS BEAM CAME FROM AN OLD HOUSE

1850 1870 1880 1890 1900 1910 1920 1930 1940

DATE OF LAST RING IS THAT OF YEAR WHEN WE CUT TREE

THIS DATE OBTAINED BY COUNTING BACK FROM BARK OF A

THIS DATE OBTAINED BY COUNTING BACK FROM BARK OF A THROUGH B

SPECIMENS TAKEN FROM RUINS, WHEN MATCHED AND OVERLAPPED AS INDICATED, PROGRESSIVELY EXTEND THE DATING BACK INTO PREHISTORIC TIMES.
Class Resources
go.illinois.edu/cs101
How do you get help?

❖ Course website and FAQ
How do you get help?

- Course website and FAQ
- Forum (Piazza)
How do you get help?

- Course website and FAQ
- Forum (Piazza)
- Textbook
How do you get help?

- Course website and FAQ
- Forum (Piazza)
- Textbook
- Teaching assistants (labs, office hours)
How do you get help?

- Course website and FAQ
- Forum (Piazza)
- Textbook
- Teaching assistants (labs, office hours)
- Course administration (logistics, exceptions, DRES)—cs101admin@cs.illinois.edu
Next steps
Next steps

- Acquire course materials
Next steps

- Acquire course materials
- Complete quiz00, hw00
Next steps

- Acquire course materials
- Complete quiz00, hw00
- Sign up for the forum
Next steps

- Acquire course materials
- Complete quiz00, hw00
- Sign up for the forum
- Attend lab next week