



# From Screens To Society :

## Embedding Social and Civic Responsibility in Introduction to Computer Science

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### INTRO:

- CS III focuses on the technical aspects of coding rather than impacts
- Modify the current class to have both take-home and in-class assignments that center the code in real-world situations
- Help students contextualize how code might impact people through biases, predatory algorithms being implemented, and sensitive data handling

### ASSIGNMENTS

#### Real Life Scenarios:

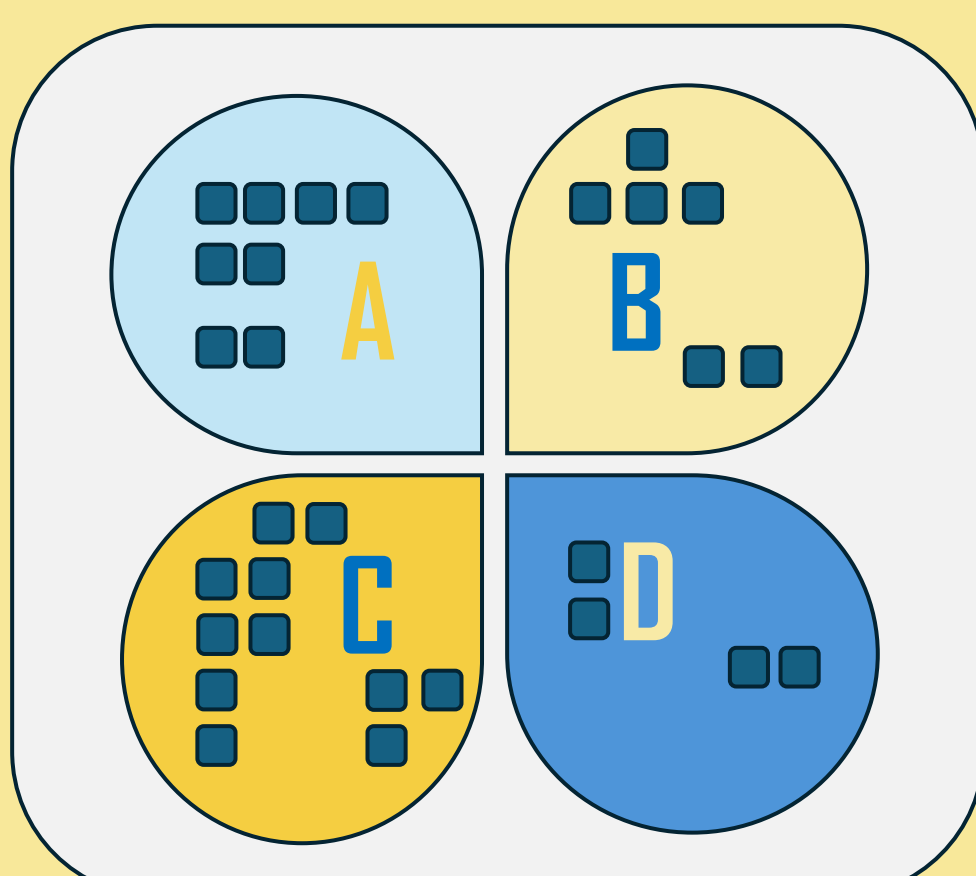
- Gig Economy
- Loan Approvals
- Healthcare/Sensitive Data
- Predatory Algorithms

#### Intro CS Topics:

- Variables, print(), and input()
- Loops and Conditionals
- Dataset Navigation
- Functions

#### Basics Assign.

Gig Economy Work Planner  
Revenue Boost Factors

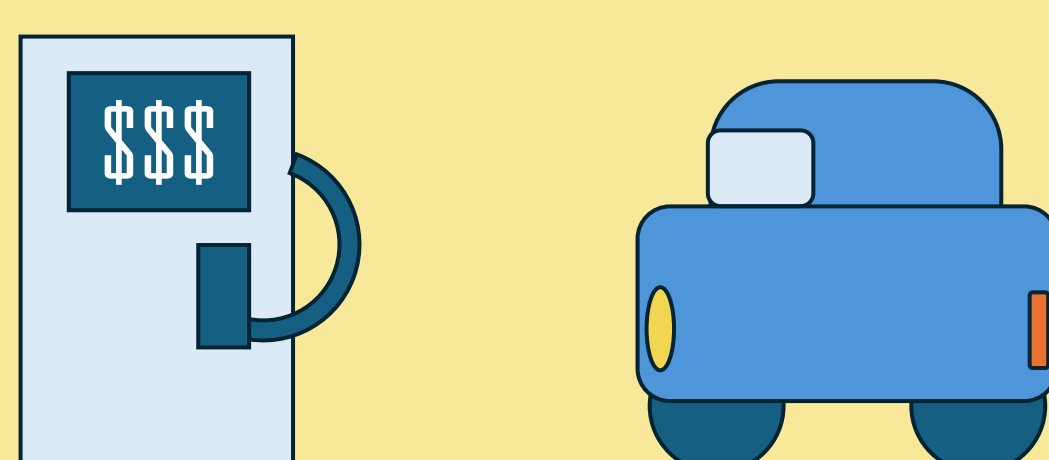


Example Neighborhood Map

SUN MON TUES WED THRS FRI SAT

Example Work Week

Revenue Deduction Factors



Cost Of Fuel

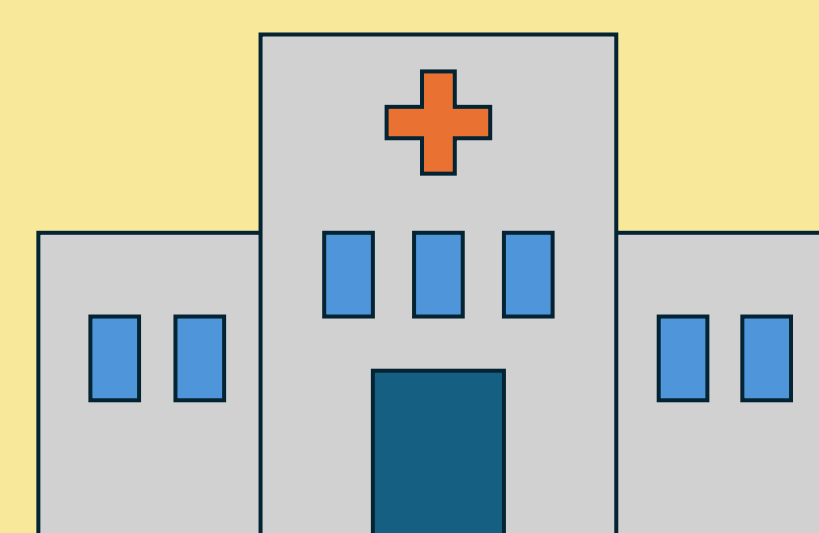
Miles Traveled

Calculations Needed

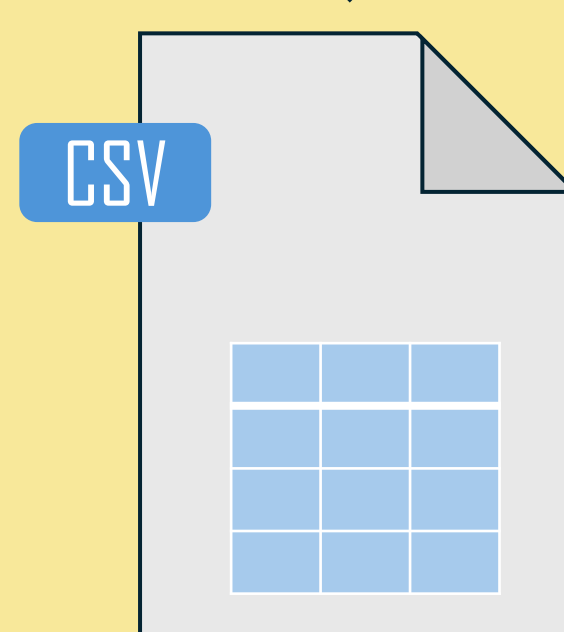
Base Pay \* Hours Worked \* Revenue Boost  
- Revenue Deductions = Total

#### Dataset Assign.

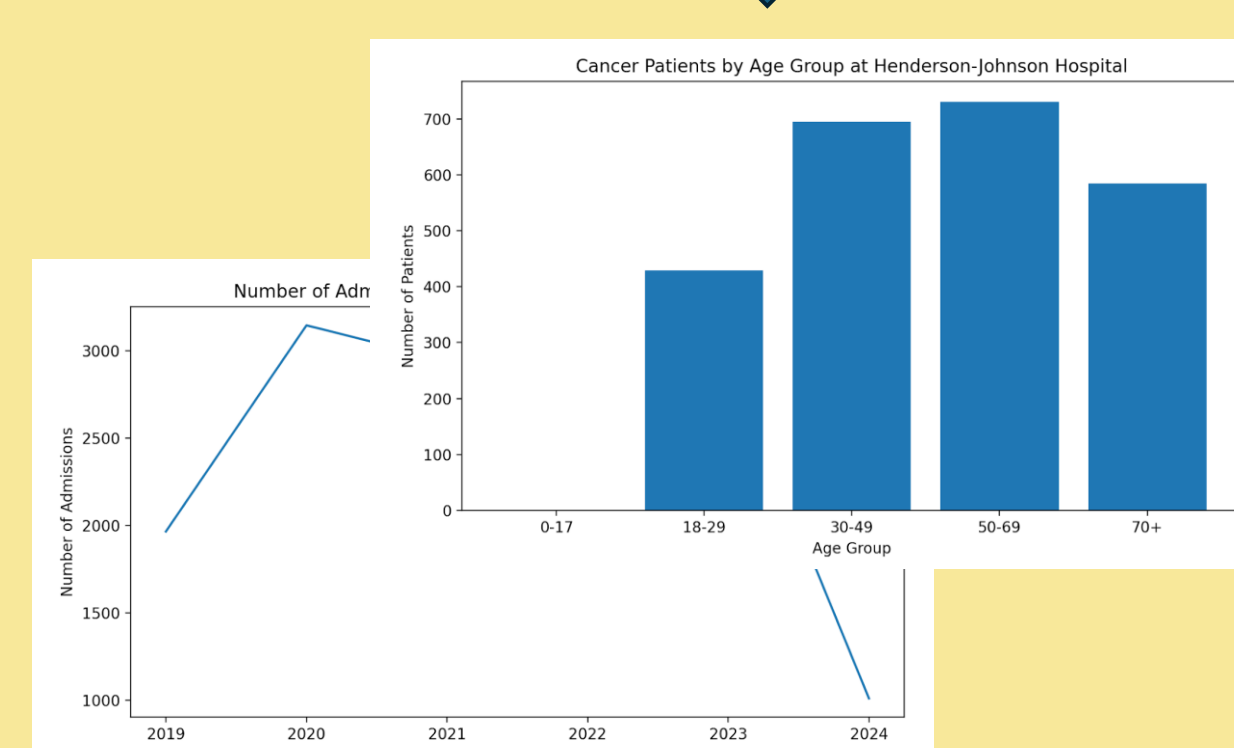
Healthcare Data Manipulation



Private Data



Manipulate Data



Data Visualization

### TESTING

#### Loops/Conditionals

#### Assign.

##### Assignment Code:

Original Code:

```
def main():
```

Refactored Code:

```
def user_input():
```

```
def analysis():
```

##### Test Suite Code:

```
def user_input():
```

```
def analysis():
```

- Cannot be tested with Pytest suite
- Style can be tested by Pylint

- Can be tested with Pytest suite with standardized output
- Style can be tested by Pylint

##### Grading Rubric:

###### Logic

- Passes pytest
- No extra code
- Shows knowledge of loops and conditionals

###### Style

- Passes pylint
- Questions posed are descriptive
- Comment are meaningful

###### Reflection

- Thoughtful responses
- Responses engage with the ethical concerns

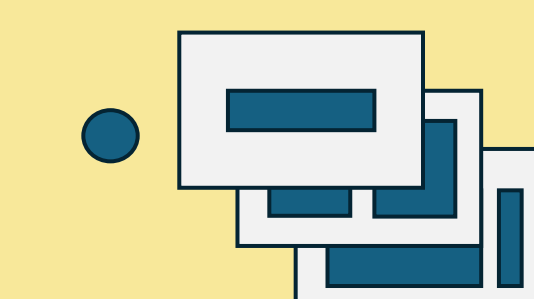
### IN-CLASS WORK

#### Basics Assign.

MONDAY

WEDNESDAY

FRIDAY



Instruction Slides

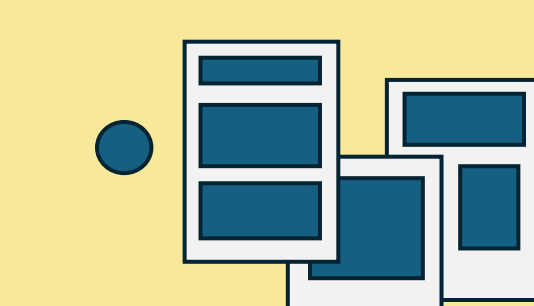


In-Class Worksheet

MONDAY

WEDNESDAY

FRIDAY



In-Class Worksheet



In-Class Lab

MONDAY

WEDNESDAY

FRIDAY



In-Class Lab

Data Types Variables Print() Input()  
Integers count = 0  
Floats total = 1.7  
Strings name = "Lu"  
print("Hello, World!")

Type Practice Print(): (Strings)  
a = 4 → int  
print('Hello' + 'World')

Print(): (Integers) Error Messages:  
print(int(7) / 2)  
TypeError: "six" / 3

Currency Converter Tip Calculator  
15% 30%  
20%

Personal Expenses Calculator GPA Calculator (Bonus)  
6 pts A  
6 pts B  
3 pts C  
3.4

### FUTURE DIRECTIONS

- Create a final project outline for students where they can showcase their accumulated knowledge of code and societal impact
- Create a video walk-through of the in-class activities