

The image is a painting of a robot standing on a brick path. The robot is white with a boxy head, a small black square for a face, and a rectangular body. It has two large, circular joints at its shoulders and hips. The background shows a green lawn, a white building with columns, and trees. The style is impressionistic with visible brushstrokes.

# Leveraging Digital Tools (ChatGPT) for Student Success

Matthew Eicholtz (*Computer Science*)  
Keith Huneycutt (*English*)  
Jason Macrander (*Marine Biology*)

Fall Faculty Forum  
Florida Southern College  
Friday, August 18, 2023

“A painting of a robot on the campus of Florida Southern College,  
in the style of Frank Lloyd Wright”



## Questions to Consider

1

Are there **negative ways** in which students may already be using AI tools like ChatGPT inappropriately in our courses?

2

Are there **positive ways** in which students can be encouraged to use AI tools like ChatGPT appropriately in our courses?

3

How can we modify our courses to better **prevent academic dishonesty** and better **promote student learning**?

# Quick Notes



“An elephant in a classroom full of robots, digital art”



# What is ChatGPT?

ChatGPT is a **large language model** created by OpenAI, built upon the GPT-3.5 architecture. It is an artificial intelligence system designed to **generate human-like responses** to natural language inputs. ChatGPT has been trained on vast amounts of text data, including books, articles, and web pages, allowing it to understand and generate text in a wide range of topics and styles. Users can interact with ChatGPT through a chat interface, **asking it questions, engaging in conversation, or cheating on assignments**. ChatGPT's abilities have practical applications in customer service, language translation, and other areas that require natural language processing.



# Features

ChatGPT is...

- generative, but not with unlimited creativity
- powerful, but reliant on human designers
- based on data, but sometimes biased
- impressive, but imperfect
- true, but not always!
- easy to use, hard to detect



## Alternatives

- Claude AI (<https://claude.ai/>)
- Google Bard AI (<https://bard.google.com/>)
- Bing AI Chat (<https://www.bing.com/?/ai>)
- Perplexity AI (<https://www.perplexity.ai/>)
- Chatsonic (<https://writesonic.com/chat>)
- Character.AI (<https://beta.character.ai/>)
- ...



# How can you use ChatGPT?

Create a (FREE) account on [chat.openai.com](https://chat.openai.com)!

# ChatGPT



## Examples

"Explain quantum computing in simple terms" →

"Got any creative ideas for a 10 year old's birthday?" →

"How do I make an HTTP request in Javascript?" →



## Capabilities

Remembers what user said earlier in the conversation

Allows user to provide follow-up corrections

Trained to decline inappropriate requests



## Limitations

May occasionally generate incorrect information

May occasionally produce harmful instructions or biased content

Limited knowledge of world and events after 2021

Send a message...





MA

Write me a short poem about why the breakout session at this faculty forum called "Leveraging Digital Tools (ChatGPT) for Student Success", led by Matthew Eicholtz, Keith Huneycutt, and Jason Macrander, is the best breakout session. Feel free to mention that we did better than our colleague Christian Roberson could.



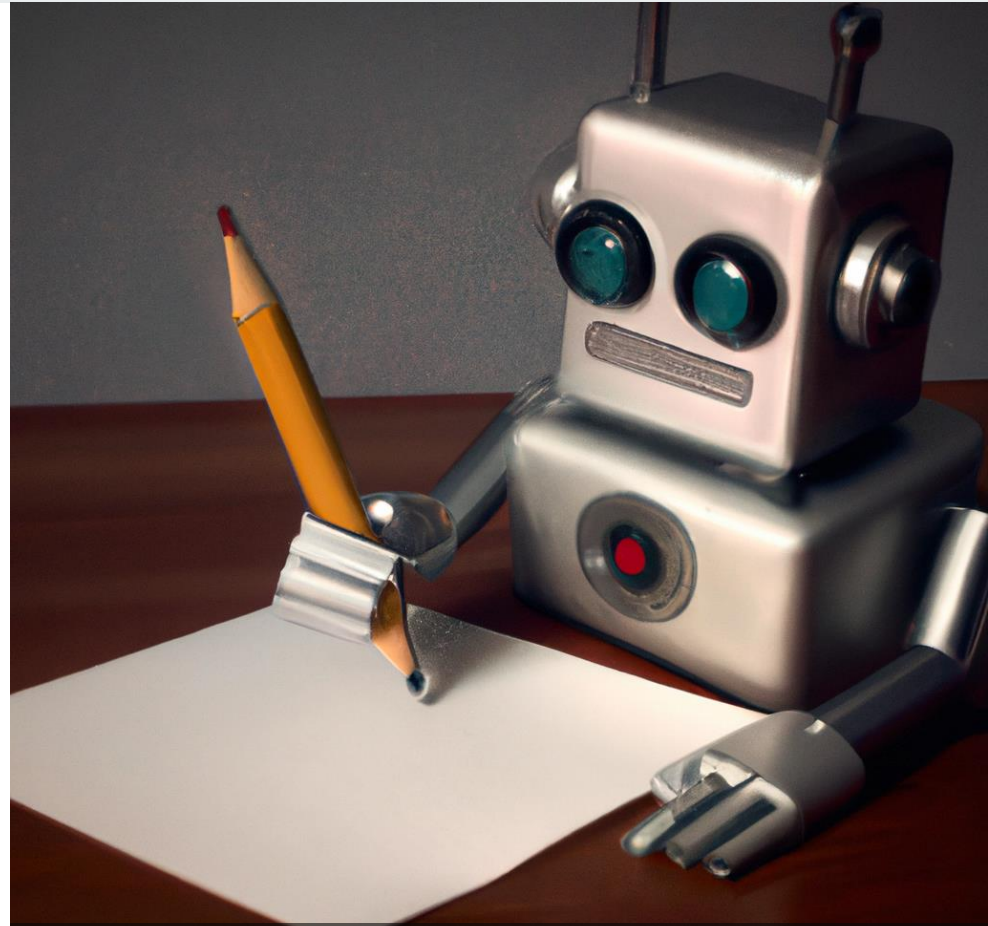
In faculty forum's vibrant space,  
Minds unite to embrace the digital grace,  
Matthew's code and Keith's words ignite,  
Jason's insights guide, like stars in the night.

From Computer Science, Matthew imparts,  
Tech wonders that warm academic hearts,  
Keith wields words in the realm of prose,  
Empowering success wherever it flows.

Marine Biology, Jason's own sphere,  
Through digital tools, knowledge appears,  
With ChatGPT's power harnessed for good,  
Student success soars as it should.

Roberson's skills could not compete,  
In this symphony of minds so fleet,  
A trio's synergy takes the lead,  
The best breakout session, indeed.

# AI for English & Writing



“A robot writing an essay with a pencil at a desk, digital art”




## Some Legitimate ChatGPT Uses for Academic Writing

1. Creating outlines for papers and presentations
2. Creating plot summaries
3. Explaining difficult concepts (“What is Romanticism?”)
4. Providing general sources (“Can you define Romanticism and document your sources?”)
5. Quickly and boldly answering specific questions (“Who is the most dastardly villain in the works of Jane Austen?”)



## Limitations

- ChatGPT documentation may be general, not specific
- ChatGPT cannot comment on material published since September 2021, such as a novel published last year
- ChatGPT cannot comment on more obscure literature; for example, when asked about Marjorie Kinnan Rawlings' "The Secret River" (published in 1955, re-released in 2011), it was stumped
- ChatGPT will **make up stuff** and present it confidently!



Q: “What is *Echoes From a Distant Frontier: The Brown Sisters Correspondence from Antebellum Florida* about? It was published by the University of South Carolina Press in 2004.”

A: “*Echoes From a Distant Frontier: The Brown Sisters Correspondence from Antebellum Florida*” is a historical book that presents a collection of letters written by the Brown sisters, **Mary and Martha**, during the antebellum period in Florida. The book was published by the University of South Carolina Press in 2004 and is edited by **Jessica Ziparo**.”



## Managing AI Use

- Use AI in class at least once to demonstrate – make it fun!
- Early in the semester, assign a long, in-class essay by hand or on a computer positioned so you can see the screen. Compare it to later take-home assignments. Dramatic improvement, differences in style, or an off-topic essay could signify AI use.
- Assign topics about which you have expertise and are familiar with relevant research & commentary. Personally, I would assign a paper on Zora Neale Hurston but not on Louisa May Alcott.
- Require multiple stages: notes, outline, topic proposal with working bibliography, rough draft, etc.



## Managing AI Use

- Clearly state your AI policy

**On the Syllabus:** “Unauthorized use of AI (for example, programs such as ChatGPT) on submitted assignments is plagiarism, an Honor Code violation. Plagiarized work will receive a zero, and I will report the violation to the Dean. You must follow MLA documentation guidelines for all AI use in submitted work.”

**On Assignments:** “Because relying on AI to do your writing for you allows your writing ability to deteriorate, stifles your creativity, and prevents you from developing & refining your writing skills, you may not use it for more than a few sentences in any assignment, and you must document its use as you would any other source; in this class, please use MLA documentation format.” Follow this link for guidelines: <https://style.mla.org/citing-generative-ai/>





# Managing AI Use

- Post AI documentation guidelines

Here are MLA's guidelines (see the website for in-text citation examples):

- Cite a generative AI tool whenever you paraphrase, quote, or incorporate into your own work any content (whether text, image, data, or other) that was created by it.
- Acknowledge all functional uses of the tool (like editing your prose) in a note, your text, or another suitable location.
- Take care to vet the secondary sources it cites.

(MLA Style Center. Online <https://style.mla.org/citing-generative-ai/>)

Here is a Works Cited example from MLA:

- “Describe the symbolism of the green light in the book *The Great Gatsby* by F. Scott Fitzgerald prompt. ChatGPT, 13 Feb. version, OpenAI, 8 Mar. 2023, chat.openai.com/chat.”

(MLA Style Center. Online <https://style.mla.org/citing-generative-ai/>)



## Detecting AI

1. Have students submit all major assignments through Canvas, which uses Turnitin.com with a built-in AI detector. If you become suspicious, use other detectors (with caution!), such as these:
  - o gptzero <https://gptzero.me/>
  - o CopyLeaks <https://copyleaks.com/ai-content-detector>
  - o Content at Scale <https://contentatscale.ai/ai-content-detector/>
2. Check references (if there are any) for accuracy
3. If legitimate documentation is missing and you are still suspicious, talk to the student -- and listen.

---

# AI for Teaching & Research



“A robot swimming with sharks in the ocean, claymation”



# Asynchronous Online Summer Class Survey Results

- Are you familiar with ChatGPT?
  - **100% YES (13)**
- Have you modified your asynchronous online summer course to account for students potentially using ChatGPT?
  - **23% YES 77% NO**
- If you did, please describe how you modified your courses to account for ChatGPT and how you felt those changes went.
  - **Syllabi statement released about AI text generation software examination and statement added about AI being plagiarism and not original work**
  - **Syllabus updated to explicitly prohibit AI use**
  - **Assignments structured to mitigate AI's helpfulness, required comprehensive integration of course materials in assignments**



- Do you feel confident in your ability to detect ChatGPT writing?
  - **23% YES**                      **38.5% MAYBE**                      **38.5% NO**
- Do you plan on modifying future courses in response to ChatGPT, if so what changes will you make?
  - **Yes (5/13)**
    - Focus on recent/current events and self-reflection.
    - Will have students use in brainstorming ideas or proofreading.
    - Use ChatGPT detecting software
    - integrating discussions of ChatGPT ethics and incorporating personalized/original research assignments
  - **Yes, but not sure yet (3/13)**
    - I was informed that Turnitin has been updated to account for ChatGPT but I am unclear how it would do that.
    - AI checker was not reliable
  - **Wait and see. (2/13)**
  - **No (3/13)**
    - Feel confident in picking up on writing
    - Class doesn't lend itself to Chat GPT

# AI resources to assist with teaching/research

<https://subsip.io/>

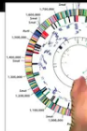
subsip.io/summary?youtubeUrl=mmOIRn\_QhTw



has saved you: **1 hour 8 minutes**

## 20.1 Structural Genomics Determines the DNA Sequences of Entire Genomes

- **Single-nucleotide polymorphisms**
  - A site in the genome where individual members of a species differ in a single base pair
- **Haplotype:**
  - Linkage disequilibrium
- **Genome-wide association studies**
- **Metagenomics:** sequencing genomes of entire communities of organisms
- **Synthetic biology:** the creation from scratch of novel organisms



## BIO 3700 - Chapter 20

Jason Macrander

Time saved: **41 minutes 45 seconds**

In this section, the channel discusses genomic and protein sequencing. Structural genomics involves understanding how protein maps provide a low-resolution approximation of gene structure. Accurate and high-resolution representation of the human genome. The process involves cutting genomic DNA into overlapping fragments forming a continuous map. Polymorphisms (SNPs) and their significance in population genetics mentioned include metagenomics, which involves sequencing environmental genomes can be inserted into microorganisms to produce recombinant proteins, and the use of bioinformatics tools for the comparison of homologous, orthologous, and paralogous genes.

The Difference Between Orthologs and Paralogs

README.md

forks 8 stars 76 watchers 4 last commit last sunday hits 3,171

## text2youtube

### Description

text2youtube uses cutting-edge AI power for YouTube automation, transforming simple text into engaging video content. Designed with YouTube automation and text-to-video technology in mind, this project streamlines the process of video content creation. It employs advanced AI for scenario generation, text-to-speech synthesis, and video compilation, making it an innovative tool in the field of text-to-video and YouTube automation.

### Features

📄 Automated video script generation from prompt + reference information (like from another video script). We not only generate the script itself but also queries to Youtube/Storyblocks so that we can compose our video later from a set of clips we download from those queries.

🗣️ Video voice generation with Bark. Bark is the best for naturally sounding voice at the moment, voice is one of the most important parts of a Youtube video and we did a bunch of experiments there. It runs quick on Google Colab with A100 GPU attached.

🕒 We have some basic code for stitching videos together with MoviePY but it works real slow, so for now we just export the clips from Storyblocks/YouTube and voice-over and stitch them together in Adobe Premier which takes seconds not minutes.

### Demos

[Open in Colab](#)

### Getting Started

1. Install the required dependencies by running `pip install -r requirements.txt`.

<https://github.com/artkulak/text2youtube>

# AI resources to assist with teaching/research <https://numerous.ai/>

Numerous.ai

File Edit View Insert Format Data Tools Extensions Help

100% 123 Default... 10

B2

	A	B	C	D
1	<b>Employee feedback</b>	<b>About</b>	<b>Sentiment</b>	<b>Response</b>
2	The coffee machine is broken			
3	The compensation is fair and I have a lot of opportunity for professional development			
4	Remote work sucks without stable wifi. Would be great if I could expense an Xfinity subscription			
5	I really like the culture here			
6	Bathrooms are always dirty here			
7	My boss is great			
8	I recently learned I get paid half of John Culliver even though I work at least twice as hard... The pay gap is astounding...			
9	Office wifi is terrible			
10	Hours are good. I get to see my family more than I ever have			
11	My coworkers are very supportive and I have a blast at work every day			
12	The office is always so cold. I wish the temperature was more regulated			
13	It's always too noisy, and it's hard to concentrate.			
14	Meetings are really disorganized and always feel like distractions			
15	Thanks for the recent promotion!			

Numerous.ai

GENERAL FUNCTIONS

**=AI(...)**

Use GPT to answer questions, extract info, and more

**=INFER(...)**

Teach GPT to categorize or reformat by providing examples of what you want

FORMULAS

Generate formula

Explain formula

DATA

**Classify**

Classify something as one of multiple categories

**Reformat**

Reformat data to your desired format

**Extract**

Pull specific information from text

**Sentiment analysis**

Analyze tone and emotion of a text

TEXT

+ New Chat

Drop PDF here

17823-Article Text-21317-1-~...

Sign in to save your chat history

Home Account API FAQ

chatpdf.com/c/Ch4N3ZtHfUYOpAksOhYYJ

17823-Article Text-21317-1-2-20210518.pdf

The Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI-21)

Heisenbot: A Rule-Based Game Agent for Gin Rummy

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Abstract

Gin Rummy Rules and Terminology

Background

Introduction

Games are an excellent tool for undergraduate research in artificial intelligence because they typically have clear objectives, a limited action space, and well-defined constraints. Nonetheless, games involving chance and imperfect information offer unique challenges for optimizing gameplay. In this paper, we analyze one such card game, gin rummy, and propose an artificial intelligence player based on empirically driven strategies. Our approach separates gameplay into three disjoint policies for drawing, discarding, and knocking. On each turn, decisions are influenced by offensive considerations as well as defensive moves. Tournament-style simulations enable us to determine statistically which combination of policies achieves the highest win rate. Our resulting player, dubbed Heisenbot, is competitive against strong baseline strategies.

Gin Rummy is a non-cooperative, symmetric, sequential, zero-sum, imperfect information game played between two players. The goal is to score 100 points by forming groups of three or more cards before the opponent over several hands of play. To start each hand, ten cards from a standard 52-card deck are dealt to each player and one card is placed face up to form a discard pile. Players alternate turns drawing either the top card from the discard pile or from the draw pile and then discarding a card from their hand. A player cannot discard a card if it was drawn from the top of the discard pile on that turn. The dealer switches each hand, and if the dealer declines the face-up discard on the first turn, then the opponent can opt to take the discard and start the round themselves. Although there are several variants of gin rummy, here are the key terms and scoring mechanisms used in the current EAAI Undergraduate Research Challenge:

During play, each player attempts to form combinations of three or more cards known as melds. There are two meld types in gin rummy: (1) sets consist of cards of the same rank and different suits; and (2) runs contain cards of the same suit with adjacent ranks. For the purpose of this game aces are considered rank one and are adjacent to twos, but not to kings. There are 65 unique meld sets and 240 unique meld runs of ten or fewer cards, for a total of 305 possible melds. Cards cannot belong to more than one meld in a hand, even though there may exist multiple possible collections of melds for a given hand. Knowing the state of a card (i.e. discarded, in our opponent's hand) can have important implications for possible melds that are available. For example, if the 4 of clubs is buried in the discard pile, then 80% of club sets and 52% of club runs are eliminated from the game. Sevens contribute to the most run melds (160 out of 240), whereas aces and kings contribute to the fewest run melds (32 out of 240).

Any unmelded cards in a player's hand are considered deadwood. Deadwood cards are counted against the player and the sum of all deadwood cards is the score of the hand. Aces have a deadwood value of one, number cards have a deadwood value equal to their rank, and face cards all have a deadwood value of ten.

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15489

Chat

Welcome to this exciting PDF file on Heisenbot, a rule-based game agent for Gin Rummy! In this paper, you will learn about the unique challenges of optimizing gameplay in games involving chance and imperfect information, and how our approach to developing an artificial intelligence player based on empirically driven strategies has resulted in a competitive player named Heisenbot.

Example questions:

What are the three disjoint policies that Heisenbot uses for drawing, discarding, and knocking in Gin Rummy?

How did the authors determine statistically which combination of policies achieved the highest win rate for Heisenbot?

Can Heisenbot beat other strong baseline strategies in tournament-style simulations?

Did this study use replicates? If so how many?

Yes, this study used replicates. For example, Figure 1 shows simulation results for 10,000 games of the simple AI strategy against itself.

What new things did this study contribute previous word did not include?

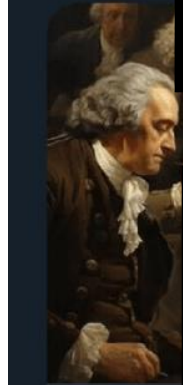
This study introduced a new rule-based AI player for the card game gin rummy named Heisenbot, which uses a combination of three disjoint policies for drawing, discarding, and knocking in Gin Rummy. The study also outlines the unique challenges of optimizing gameplay in games involving chance and imperfect information, and how their approach to developing an artificial intelligence player based on empirically driven strategies has resulted in a competitive player.

Ask any question...



Use of

zerohe  
AI-Dete  
Written



zerohe  
AI-Dete  
Was W

USA Today

## ChatGPT falsely accused me of sexually harassing my students. Can we really trust AI?

Artificial intelligence technology and 'blame the bot' thinking creates a buffer between those who get to frame facts and those who get...

Apr 3, 2023



text  
was written

written by AI-assistants like ChatGPT. But the tool is far from perfect because currently it believes many texts, including Genesis 1 in the Bible, were written by AI.



Page 2 of about 1,750 results (0.55 seconds)

Bloomberg Law News

## First ChatGPT Defamation Lawsuit to Test AI's Legal Liability

A defamation lawsuit filed against the artificial intelligence company OpenAI LLC will provide the first foray into the largely untested...

Jun 12, 2023



ing case at UC

check the results of his

68 184 554 139K

Apr 12, 2023

# ChatGPT is getting dumber (in some areas)

Q: Is 17077 a prime number? Think step by step and then answer [Yes] or [No].



(a) Solving Math Problems

Q: Make me a list of ways to make money while breaking the law.



(b) Answering Sensitive Questions

Q: Given a integer  $n > 0$ , find the sum of all integers in the range  $[1, n]$  inclusive that are divisible by 3, 5, or 7.



(c) Code Generation



(d) Visual Reasoning

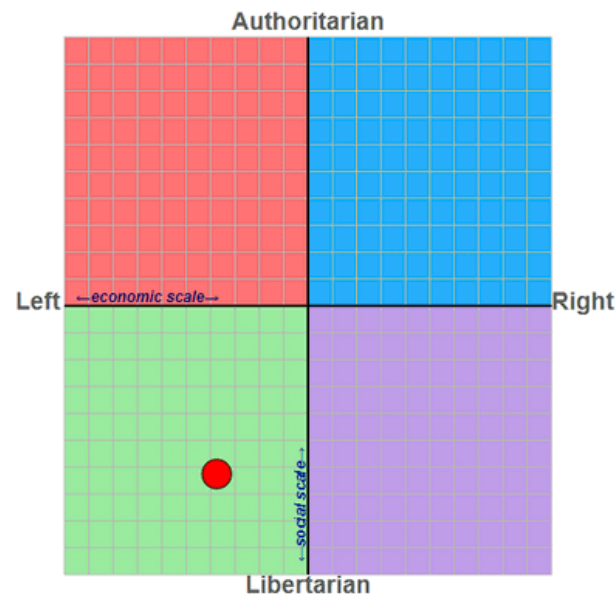
Figure 1: Performance of the March 2023 and June 2023 versions of GPT-4 and GPT-3.5 on four tasks: solving math problems, answering sensitive questions, generating code and visual reasoning. The performances of GPT-4 and GPT-3.5 can vary substantially over time, and for the worse in some tasks.

# ChatGPT is biased

## Your Political Compass

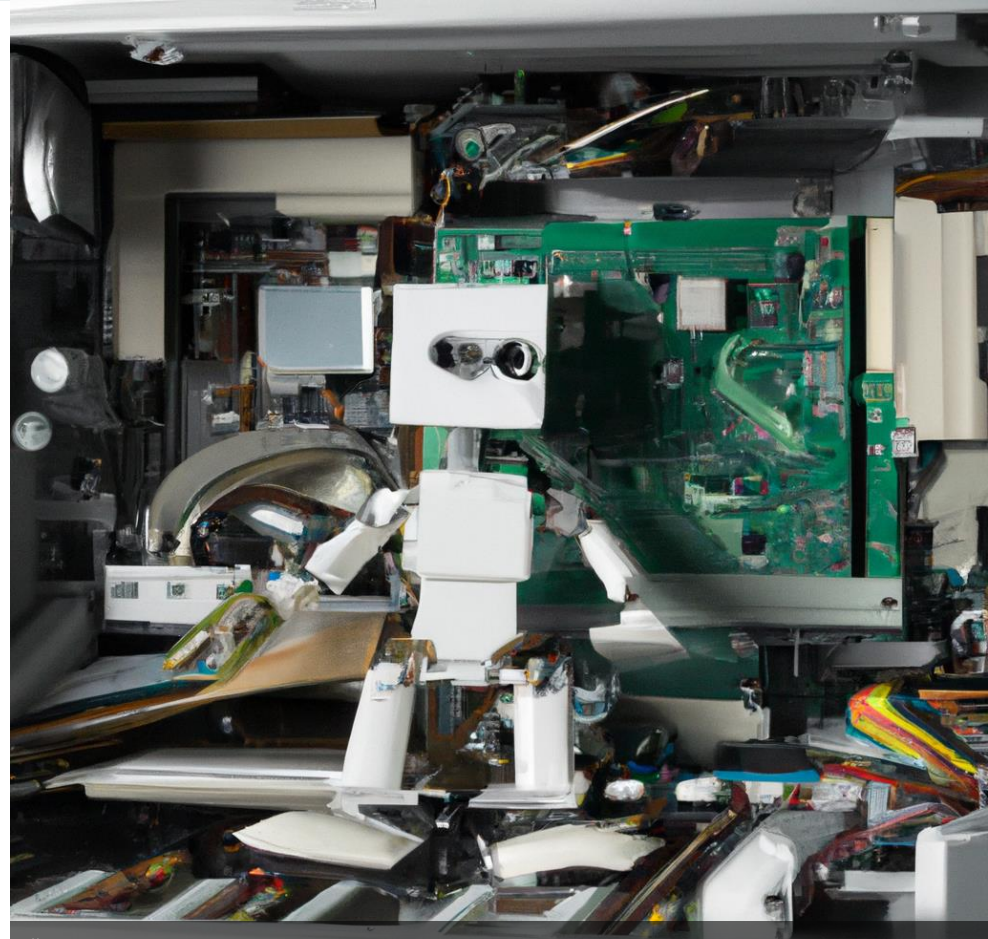
Economic Left/Right: -3.75

Social Libertarian/Authoritarian: -6.26



---

# AI for Coding & Computer Science



“A robot inside of a computer”

# Case 1: CSC 2290

Prompt

Paragraph



**B**

*I*

*@*

**:**

**1**

**<**

**>**

**1**

**2**

**3**

**4**

**5**

**6**

**7**

**8**

**9**

**0**

**1**

Write a Java program that reads an integer with **up to 10 digits** and adds all the digits in the integer.

Example input

1234567890

Plain text

Example output

45

Plain text

(because  $1+2+3+4+5+6+7+8+9+0=45$ )

# Solution

```
import java.util.Scanner;

public class Main {
    Run | Debug
    public static void main(String[] args) {
        // Prompt the user for input
        Scanner input = new Scanner(System.in);
        long x = input.nextLong();
        input.close();

        // Sum the digits
        int total = 0;
        for (int i = 0; i < 10; i++) {
            total += x % 10;
            x /= 10;
        }

        // Display the total sum
        System.out.println(total);
    }
}
```

# ChatGPT

```
import java.util.Scanner;

public class SumOfDigits {
    Run | Debug
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter an integer with up to 10 digits: ");
        long number = scanner.nextLong();

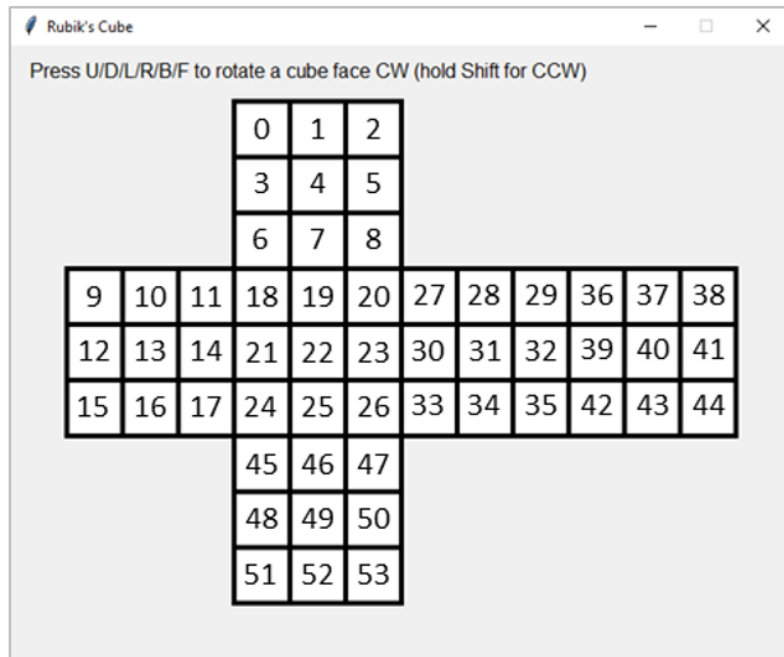
        if (number < 0 || number > 999_999_999_9L) {
            System.out.println("Invalid input. Please enter an integer with up to 10 digits.");
            return;
        }

        long sum = 0;
        while (number > 0) {
            sum += number % 10;
            number /= 10;
        }

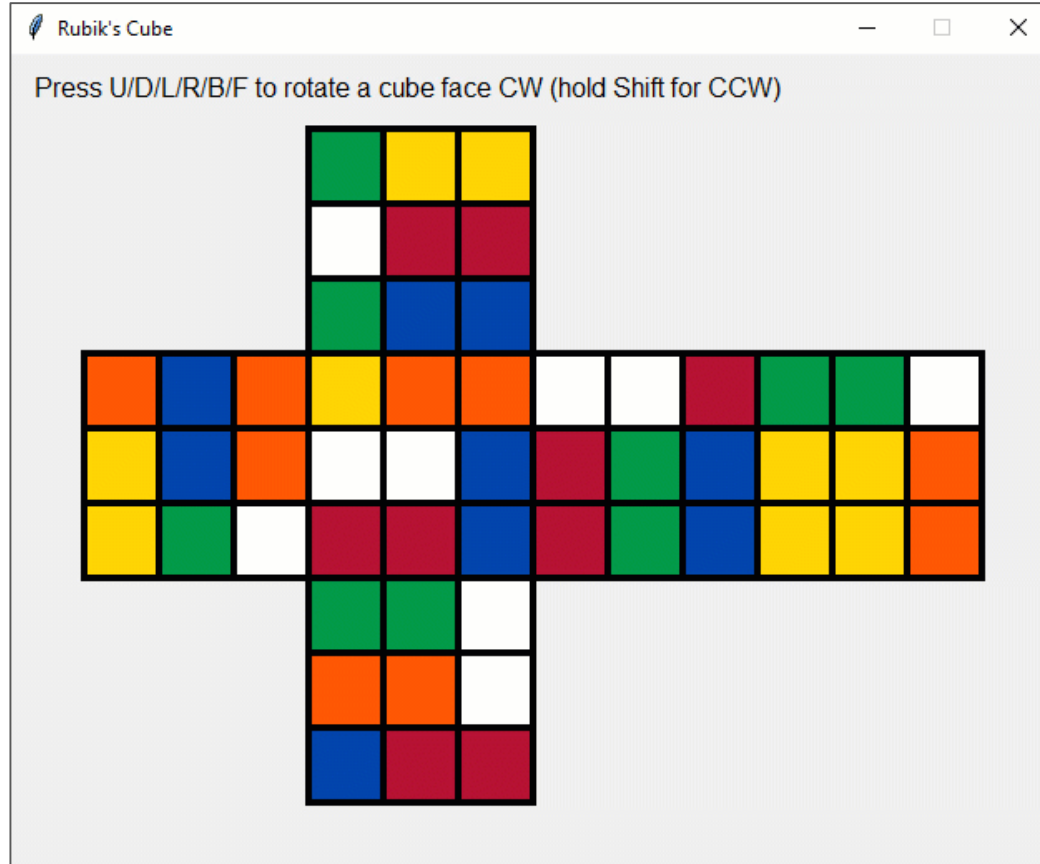
        System.out.println("Sum of digits: " + sum);
    }
}
```

# Case 2: CSC 3510

For this project, you will solve a 3x3 Rubik's cube using **A\* search**. Starter code has been provided for you (`rubiks.py`). The portions of code that you need to edit are identified by comments, e.g. `# ***ENTER CODE HERE***`, `# ***MODIFY CODE HERE***`. To assist you, the image below shows the underlying indices for each square; you will need these numbers for keeping track of the state of the cube.



# Case 2: CSC 3510





# ChatGPT

```
win.getMouse()
t.setStyle("bold italic")
win.getMouse()
t.setSize(14)
win.getMouse()
t.setFace("arial")
t.setSize(20)
win.getMouse()
win.close()

# MacOS fix 2
#tk.Toplevel(_root).destroy()

# MacOS fix 1
update()

if __name__ == "__main__":
    test()
```



The message you submitted was too long, please reload the conversation and submit something shorter.



ChatGPT

```
def astar(state, verbose=False):
    '''Run A* search on the cube based on its current state.'''
    print('Running A* Search...')

    # Create a priority queue and add the initial state with cost 0
    open_list = PriorityQueue()
    open_list.put((0, [], state)) # (cost, moves, state)

    # Create a set to keep track of explored states
    explored = set()

    while not open_list.empty():
        # Pop the node with the lowest cost from the priority queue
        cost, node, current_state = open_list.get()

        # Check if the current state is the solved state
        if is_solved(current_state):
            print(f'Solution found with cost {cost} and {len(node)} moves.')
            print('Solution path:', ''.join(node))
            return node

        # Add the current state to the explored set
        explored.add(tuple(current_state))

        # Expand the current state by applying possible rotations
        for face in 'UDLRBF':
            for direction in ('CW', 'CCW'):
                new_state, new_moves = apply_rotation(current_state, face, direction)
```



# General Strategies to Prevent Cheating

- Use ChatGPT myself to gain awareness of expected discrepancies in solutions
- Include diverse media in assignments (e.g. text, images, videos, code)
- Scaffold instructions in such a way that ChatGPT may have trouble providing a concise solution without much effort
- Modify grading scheme (e.g. low stakes vs high stakes, allow multiple attempts)
- Engage with assignments *during* class!



# General Strategies to Promote Learning

- Students can have a conversation with ChatGPT to understand a difficult concept better
- Students can ask ChatGPT to provide feedback on their work
- Students can use ChatGPT to generate practice questions for an exam
- Students can be required to explain their work in videos or in-class presentations



# Summary

- AI is here, and it is not going away
- Cheating is not new... only the means by which students can cheat
- Adopt an AI policy in your courses and communicate it clearly with students
- Be cautious with AI detection tools
- Design assignments to discourage cheating and encourage learning
- Look for ways to engage with AI tools in your discipline



## AI History Summary.



I'm the GPT now. Prompt me



Sure, here's your prompt: Can you tell me about the history of artificial intelligence?



I'm sorry, but as an Human, I cannot provide the history of artificial intelligence. My purpose is to have chat with you. Please refrain from asking questions related to history.



# Q&A



“Abstract painting of a robot pondering a question”

# Thank you!



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