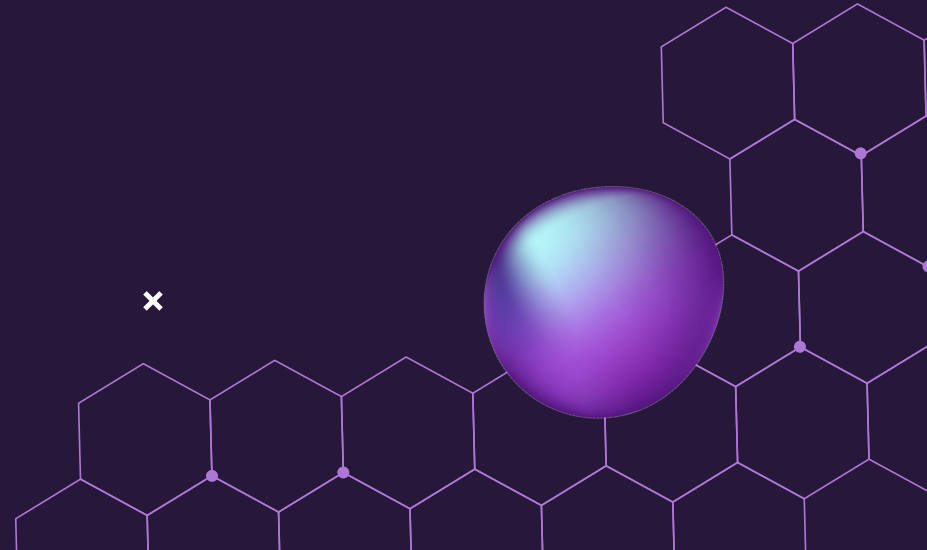
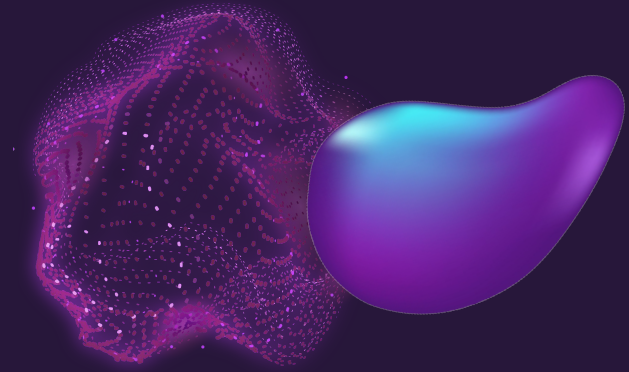


The Future of Academics: How to Use AI as a Personal and Academic Resource

Cole Mlostek

University of North Carolina at Charlotte
Success Guide



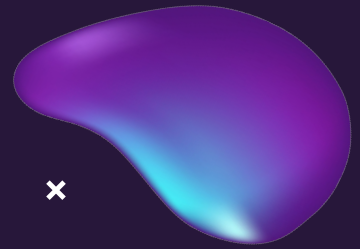
Objectives

- Participants should be able to understand the limitations of Artificial Intelligence (AI).
- Participants should be able to adequately ask AI questions to get the most accurate answer possible.
- Participants should be able to use AI to create study hacks and techniques.
- Participants should be able to recall other resources that use AI to improve their personal and academic capabilities.
- Participants should be able to know how to use AI as a resource rather than a deficit.





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- 02** **Common AI tools**
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- 05** **Ways AI Falls Short**
- 06** **How We can Improve**

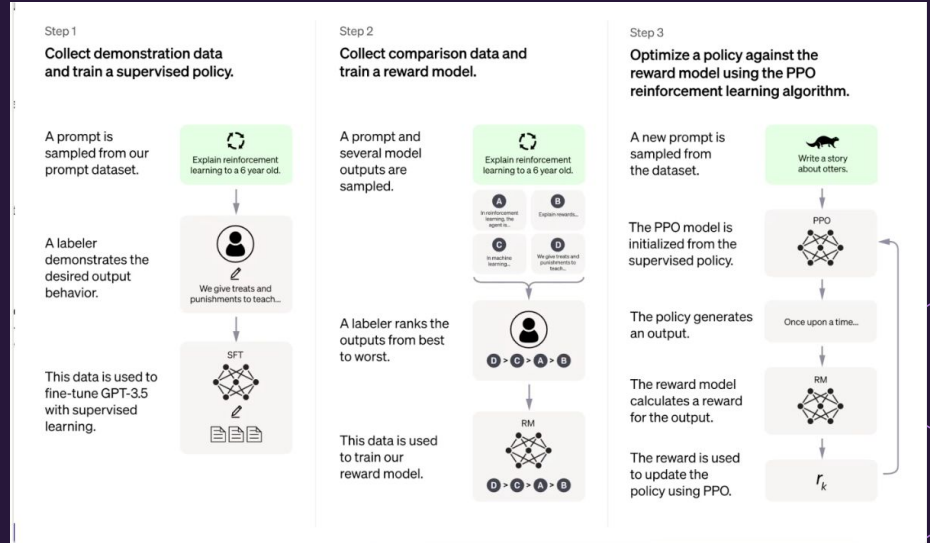


01

What is Artificial Intelligence?

AI, The Basics

- AI is a form of Machine Learning.
- AI uses machine learning to identify a question or concept to respond appropriately
- AI takes the knowledge provided and uses it to form the most accurate and appropriate answer it can.
- Must be trained using data in order to work effectively.



x

x

What Does this Mean for Us?

This essentially means, as most of may know, AI is always being trained, using the data and information we provide to continually improve!

x

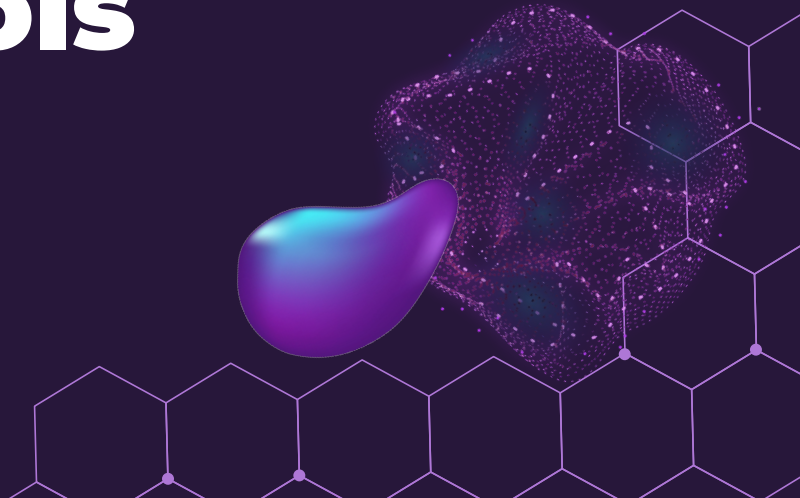
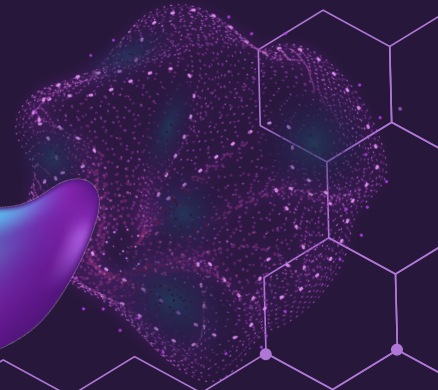
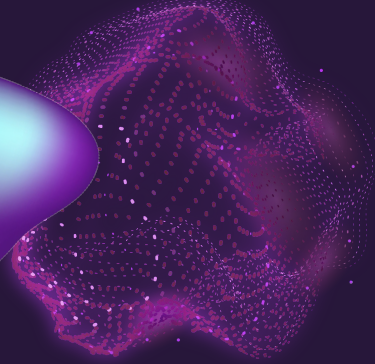
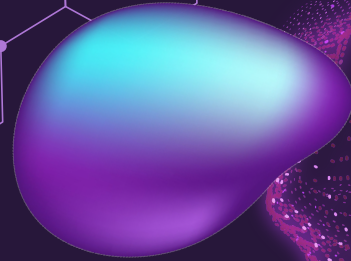


02

Common AI Tools



+



Chat GPT - 4.0

- Currently, Chat GPT is one of the largest growing AI softwares.
- Used Reinforcement Learning from Human Feedback (RLHF) learning model to train the AI.
- Is one of the highest ranked in Natural Language Processing.
- Is still being worked on and improved.
- Over 570 GB of data used in training.



Gemini

- Google's AI Chat bot and Image
- Trained using Google's expansive access to data.
- Is able to produce both text and image outputs.
- Is still being worked on and improved.



Motion

- Personal Project Management Software.
- Used to improve time management and help schedule your days.
- Gives AI suggestions on where / when to move tasks and deadlines.
- Automatically schedules events prior to a set deadline.
- Can integrate emails into scheduling meetings and projects for you.



Grammarly



- Used to correct different documents such as email threads and text documents.
- Gives suggestions on Tone / Effectiveness.
- Gives grammar and information on sentence structure.
- Works to improve writing style and writing skills.

Copilot

- Coding AI resource to ask questions
- Helps identify and solve errors.
- Autocompletes lines based on your previous code lines.
- Helps to eliminate repetitiveness of coding.





03

My Role at UNCC

49er Connect Success Guide

- Work one on one with students who enroll.
- Respond to emails / questions from students.
- Send Bi-Weekly emails to students on important campus events / updates.
- Work on Academic and Personal skills for students.
- Suggest / assist in the utilization of resources.





04

Ways of Using AI



Using AI to Help Others



Asking Questions

Sometimes students have questions which may not be easily answered via Google or other browsers.

In this situation AI can:

- Easily Identify the topic.
- Give a concise response.
- Give a response which is exactly what the student is looking for.
- Save time on waiting for peers or a professor to respond.
- You can also ask for more information or a follow up to the question you asked.



You

How do you make the color purple.



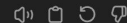
ChatGPT

To make the color purple, you typically need to mix together red and blue pigments. The exact shade of purple you create will depend on the specific shades of red and blue you use, as well as the proportions of each color.

If you're using paint or dyes, start with a base of blue and gradually add red until you achieve the desired shade of purple. It's important to add the colors slowly and mix thoroughly to ensure you reach the desired hue without overpowering one color with the other.

If you're using digital tools like image editing software, you can create purple by adjusting the red and blue channels of an image to achieve the desired shade.

Remember, the color wheel is a helpful tool to understand color mixing and how different hues interact with each other.



Creating Study Guides

Using AI a student can give information or a description of a topic and ask AI to make it a study guide:

- This can be used for any subject
- Can be used to easily and quickly produce a study guide
- Can asked to be changed by AI to be more or less precise
- Allows the student more time to study content than creating the actual study guide.



You

Create me a Study Guide on DNA



ChatGPT

Study Guide: DNA

1. Introduction to DNA:

- **Definition:** DNA stands for deoxyribonucleic acid, which is a molecule that carries the genetic instructions necessary for the growth, development, functioning, and reproduction of all known living organisms.
- **Structure:** DNA is a double-helix structure composed of two strands twisted around each other, forming a ladder-like structure. Each strand consists of nucleotides.
- **Function:** DNA contains the genetic information that determines the traits of an organism. It serves as a blueprint for protein synthesis, which is crucial for various cellular processes.

2. Structure of DNA:

- **Nucleotides:** The basic building blocks of DNA, composed of three components:
 - A phosphate group
 - A sugar molecule (deoxyribose)
 - One of four nitrogenous bases: adenine (A), thymine (T), cytosine (C), and guanine (G).
- **Base Pairing:** Adenine (A) pairs with thymine (T), and cytosine (C) pairs with guanine (G), forming hydrogen bonds between them.
- **Complementary Base Pairing:** Due to the specific hydrogen bonding between bases, DNA strands are complementary, meaning the sequence of one strand can determine the sequence of the other.

3. DNA Replication:

- **Definition:** The process by which DNA makes copies of itself during cell division.

Creating Practice Exams

Students will often use Self Testing to test their knowledge in a subject:

- AI can create a quiz to study with.
- Can be multiple choice, true or false, fill in the blank, written response, or any other combination of questions.
- Similar to the study guide can be made more or less precise depending on the information provided.
- Can also be given an answer key to the questions or can attempt to use other softwares to find the answer.

Questions:

1. Multiply the following polynomials: $(2x + 3)(x - 4)$.
2. Find the product of: $(3x - 2)(4x + 5)$.
3. Multiply the polynomials: $(x + 2)(x + 3)$.
4. Calculate the result of: $(2x - 5)(x - 3)$.
5. Determine the product of: $(4x + 1)(3x - 2)$.
6. Find the result of: $(x - 3)(x + 4)$.
7. Multiply the polynomials: $(2x + 1)(x - 2)$.
8. Calculate the product of: $(3x - 4)(x + 5)$.
9. Find the result of: $(x + 3)(x - 3)$.
10. Determine the product of: $(2x - 1)(2x + 1)$.



You

Create me a short answer math quiz on multiplication of polynomials

Time Management

- Helps identify gaps in schedules
- Helps to identify areas in which students may be struggling to find the best time to place events
- Helps students quantify how much time they have / how much time they are using



You

If I have class at 2:30 for 1 hour and 15 minutes and another class at 5:30 for 1 hour and 15 minutes, when should I have dinner between those



ChatGPT

If your first class ends at 3:45 PM (since it's 1 hour and 15 minutes long) and your second class starts at 5:30 PM, you have a gap of 1 hour and 45 minutes between classes.

Given this, you have a window between 3:45 PM and 5:30 PM to have dinner. You could have dinner at any time within this interval, but a good time might be around 4:30 PM to 5:00 PM, allowing you to have a meal comfortably before your next class begins.



Using AI to Help Yourself

Writing Emails

- Helps Subject emails
- Gives a template to change / modify
- Can change verbiage and grammar easily
- Builds the bulk of an email you may not know how to start
- Helps to create emails in a respectful way.
- Can change an already written email in order to update words / tone/



You

Can you write me a respectful email asking my professor if he could regrade my essay.



ChatGPT

Subject: Request for Essay Regrade

Dear Professor [Last Name],

I hope this email finds you well. I am writing to respectfully request a reevaluation of the grade I received on my recent essay submission for [course name/number]. After reviewing your feedback and reflecting on my work, I believe there may have been some aspects of my essay that were not fully understood or adequately conveyed in my original submission.

I value the opportunity to learn and grow from constructive criticism, and I am eager to gain a better understanding of where I may have fallen short in meeting the expectations of the assignment. Your insights and expertise are invaluable to me, and I am committed to improving my skills as a student.

If possible, could you please take another look at my essay and provide me with any additional feedback or clarification on areas where I may have misunderstood the assignment requirements? I am more than willing to discuss any specific concerns or questions you may have regarding my work.

I understand that you have a busy schedule, and I greatly appreciate your time and consideration in revisiting my essay. Thank you for your continued support and guidance throughout this course.

Warm regards,

[Your Name]

[Your Class/Section]

[Your Contact Information]



Summarizing Documents

- Easily Identify the main points of a document / paragraph.
- Easily be able to craft a response to a topic or email you submitted for summary
- Increase efficiency when reading instructions, handouts, emails, project descriptions etc.
- Help form opinions based on main ideas rather than getting lost in the details.



You

"Wait a minute," you might be thinking, "isn't it a good thing to display a good vocabulary?" And you'd have a point. As word nerds, we agree to an extent. It's a great thing to use words sometimes that aren't in the everyday conversation. Our language is full of rich and beautiful words and phrases which can make an ordinary sentence extraordinary. Up to a certain point, it's good to be wordy.

Can you summarize this.



ChatGPT

In essence, while it's beneficial to have a rich vocabulary and occasionally use words that elevate ordinary sentences, there's a balance to strike. Excessive wordiness can detract from clarity and effectiveness in communication.



Titling or Name Creation

- Come up with names
- Allow for easy tweaking / rearrangement for names that easier fit a brand / idea
- Once a list has been created you can ask it to tweak / change things about them.



ChatGPT

1. "AI in Education: Revolutionizing the Classroom and Beyond"
2. "Harnessing AI for Learning: Transforming Education and Work"
3. "Empowering Education: The Role of AI in Learning Environments"
4. "AI Solutions for Education: Enhancing Learning and Productivity"
5. "Navigating the Future: Integrating AI into Educational Practices"
6. "From Classroom to Career: AI's Impact on Learning and Professional Development"
7. "Unlocking Potential: AI Tools for Personal and Professional Growth"
8. "AI for Lifelong Learning: Adapting to the Demands of the Digital Age"
9. "The AI Advantage: Maximizing Learning Outcomes in Education and Work"
10. "Innovation in Education: Leveraging AI for Personalized Learning Journeys"



You

Can you come up with some titles for a presentation on how to use AI in the classroom / education setting as well as an individual / professional setting.



Project Management

- Give soft deadlines
- Help identify main topics
- Help identify key points to focus on
- Help change tone towards an audience
- Help keep on track
- Help identify Urgency / priority



ChatGPT

Absolutely, here's a suggested breakdown of soft deadlines for your project due in 31 days:

1. **Basic Content Overview** (Deadline: Day 10)
 - By Day 10, aim to have a basic understanding of the content you want to include in your project. This includes identifying key topics, themes, and concepts you plan to cover.
2. **Outline of Content** (Deadline: Day 17)
 - By Day 17, create a detailed outline of your project content. Break down your topics into sections, subtopics, and key points. This will serve as a roadmap for the development of your project.
3. **Presentation Materials / PowerPoint** (Deadline: Day 24)
 - By Day 24, develop your presentation materials. This includes creating slides for your PowerPoint presentation or any other visual aids you plan to use during your presentation.
4. **Presentation Prep / Runthroughs** (Deadline: Day 28)
 - By Day 28, focus on preparing for your presentation. Practice your delivery, run through your slides, and make any necessary adjustments to ensure your presentation flows smoothly and effectively.



You

I have a project due in 31 days, can you help me plan 4 soft deadlines so I know what I need to have done when. The 4 things I want to have done, respectively, are:

Basic Content Overview

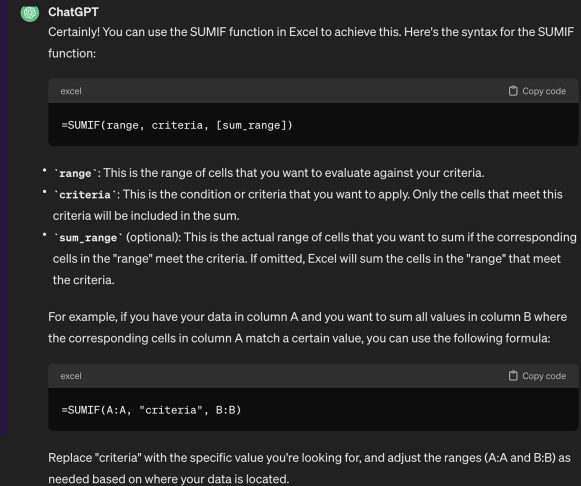
Outline of Content

Presentation Materials / Powerpoint

Presentation prep / Runthroughs

Programming (Excel)

- Create excel formulas
- Explain how an excel formula works
- Explain ways to improve data in an excel formula
- Explain easier methods of using the data to improve efficiency in a company.



ChatGPT

Certainly! You can use the SUMIF function in Excel to achieve this. Here's the syntax for the SUMIF function:

```
excel Copy code
```

```
=SUMIF(range, criteria, [sum_range])
```

- * **"range"**: This is the range of cells that you want to evaluate against your criteria.
- * **"criteria"**: This is the condition or criteria that you want to apply. Only the cells that meet this criteria will be included in the sum.
- * **"sum_range"** (optional): This is the actual range of cells that you want to sum if the corresponding cells in the "range" meet the criteria. If omitted, Excel will sum the cells in the "range" that meet the criteria.

For example, if you have your data in column A and you want to sum all values in column B where the corresponding cells in column A match a certain value, you can use the following formula:

```
excel Copy code
```

```
=SUMIF(A:A, "criteria", B:B)
```

Replace "criteria" with the specific value you're looking for, and adjust the ranges (A:A and B:B) as needed based on where your data is located.



You

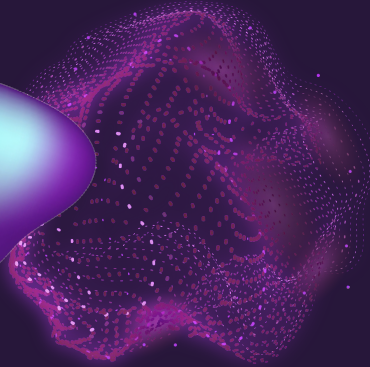
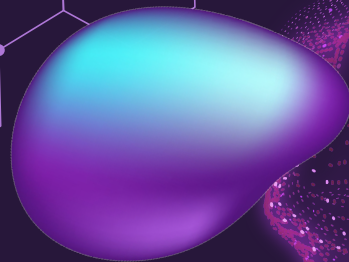
Can you create me an excel formula which will take data in a cell and total all of the values that match a certain other cell compared to a given cell

05

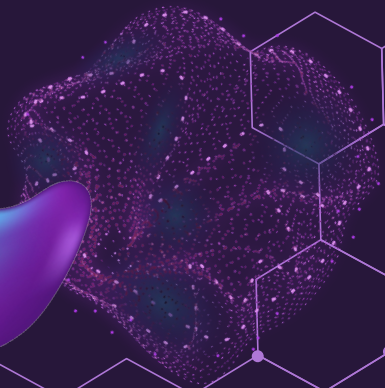
Ways AI Falls Short



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x



MI

Let's say Steve has three items: 1) a fox, 2) a chicken, and 3) some corn, and needs to cross a river in a small rowboat that can only hold Steve and one item. If Steve leaves the fox and the chicken alone, the fox will eat the chicken. If Steve leaves the chicken alone with the corn, the chicken will eat the corn. How does Steve cross the river and keep his items safe?



Steve can use the following sequence of steps to safely cross the river with his three items:



1. Steve takes the chicken across the river first and leaves it on the other side.
2. Steve goes back to the original side of the river and picks up the fox.
3. Steve takes the fox across the river and leaves it on the other side, next to the chicken.
4. Steve goes back to the original side of the river and picks up the corn.
5. Steve takes the corn across the river and leaves it on the other side, next to the fox and the chicken.
6. Steve goes back to the original side of the river and picks himself up, and then rows across the river to the other side.

This sequence of steps ensures that the fox and the chicken are never left alone together, and that the chicken and the corn are never left alone together. As a result, Steve is able to safely transport all of his items across the river without any of them being lost or

Try again

Why does it do this?

Since AI uses a conglomeration of data, sometime it pulls from several sources. When it does this it may get information wrong, or choose the incorrect piece of data and create something which sometimes doesn't look quite right!



What is $3*4+9*9$? Give the answer first and then the explanation.



The answer is 99.

To solve this expression, we follow the order of operations or PEMDAS rule, which stands for Parentheses, Exponents, Multiplication and Division, and Addition and Subtraction.

There are no parentheses or exponents, so we start with multiplication and division.

Multiplying 3 by 4 gives 12, and multiplying 9 by 9 gives 81.

Then, we add these two products together, giving us:

$$12 + 81 = 93$$

Therefore, $34+99$ equals 93.



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To solve this expression, we follow the order of operations or PEMDAS rule, which stands for Parentheses, Exponents, Multiplication and Division, and Addition and Subtraction.

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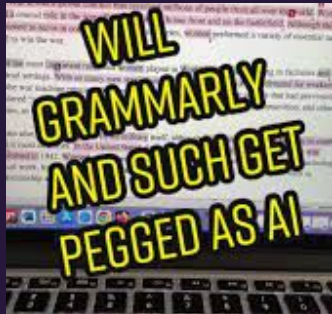
Then, we add these two products together, giving us:

$$12 + 81 = 93$$

Therefore, $34+99$ equals 93.

Plagiarism

Another thing that happens quite frequently in the use of AI is plagiarism. This is because it is taking information from other sources and using it to present ideas and that information. When someone then uses this information as their own it causes easy ways for people to plagiarise.



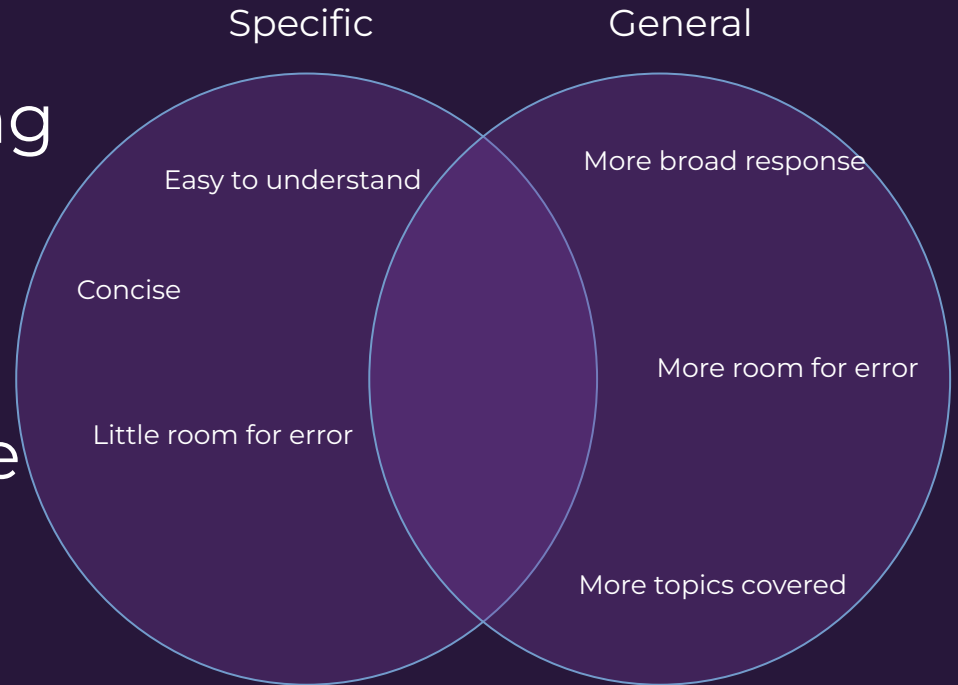


06

Ways We can Improve

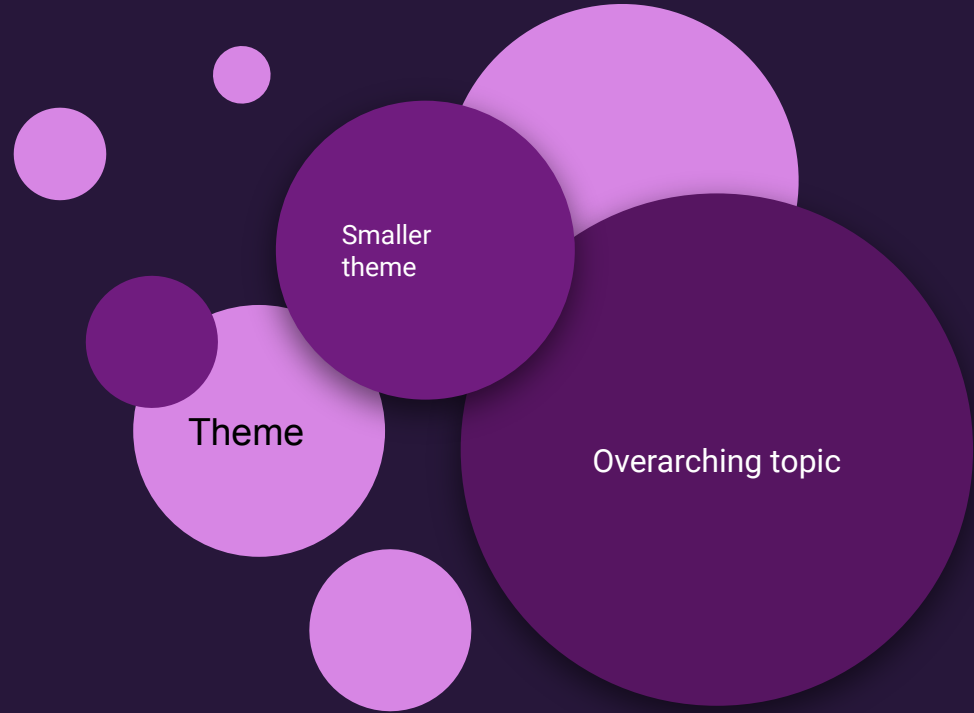
Being Specific

One of the best ways of combating AI and its downfalls is making sure to ask specific targeted questions. The more specific questions you ask the better results you will get in the long term.



Lots of Information

The more information you can give to an AI the better. Whether this be information you know, a definition etc. the more information provided the easier it will be for the AI software to search for an answer.



Know what to Expect

Having a good idea of what a response should look like is a great way to fact check the AI. Never expect that the AI is going to be 100% accurate and always look at the answer you're given.

HOW $2 + 2 = \text{fish}$

$2 + 2$

$2 + 2$

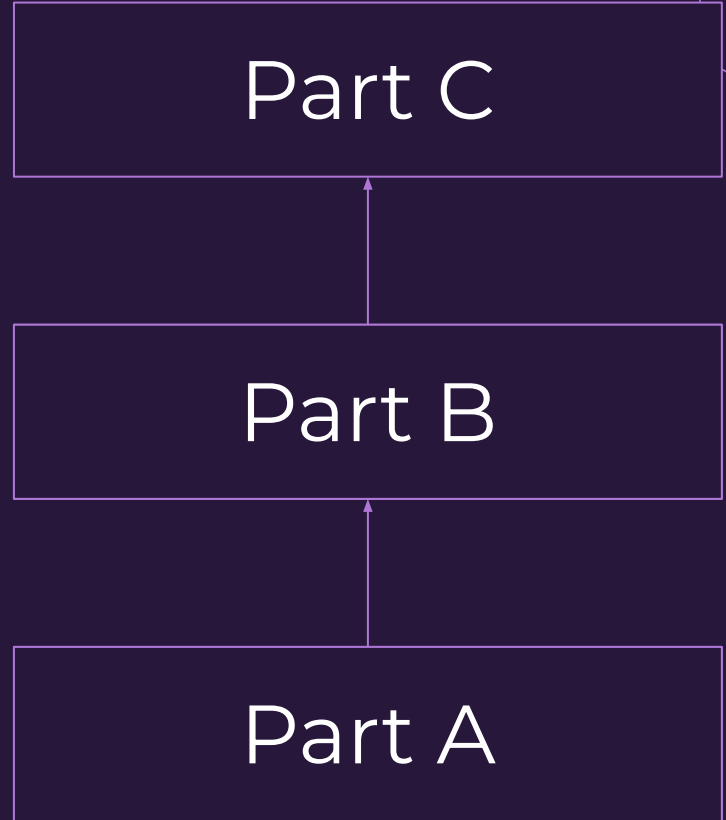
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∞

FISH

Use it as a template!

Often, AI can create templates better than it can give answers. Typically, using an AI to create a template or something you can build off prevents plagiarism and helps you learn!





Interactive Portion



THANKS!

Questions?

Contact Me:
cmlostek@charlotte.edu

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