

ChatGPT: Get the Conversation Started

We are all aware of the emerging role of Artificial Intelligence in our world and classrooms. To get the AI conversation started, colleagues at SHSU will speak to LLMs, the Student Code of Conduct, Writing in the Disciplines, Academic Integrity, and will take some time for Q&A.



Agenda

- + **Dr. Xing Liu:** LLM Models and How They Work
- + **Dr. Benjamin Mitchell-Yellin:** What AI Concerns Reveal About Our Practices, Ethical Questions, and the Recent Change in the Student Code of Conduct Definition of Plagiarism
- + **Dr. Carroll Nardone & Dr. Todd Primm:** Assignment Making in the Age of Artificial Intelligence
- + **Dr. Kristin Bennett & Dr. Brandon Strubberg:** Student Approaches to Using AI for Assignments: A Pilot Study
- + **Dr. Ryan Zapalac:** The use of AI here at SHSU

Join us on Wednesday, March 29th

3:30-4:30

CHSS C070 or Zoom

Xing Liu, Computer Science

What are large language models (LLMs)?

Language Model

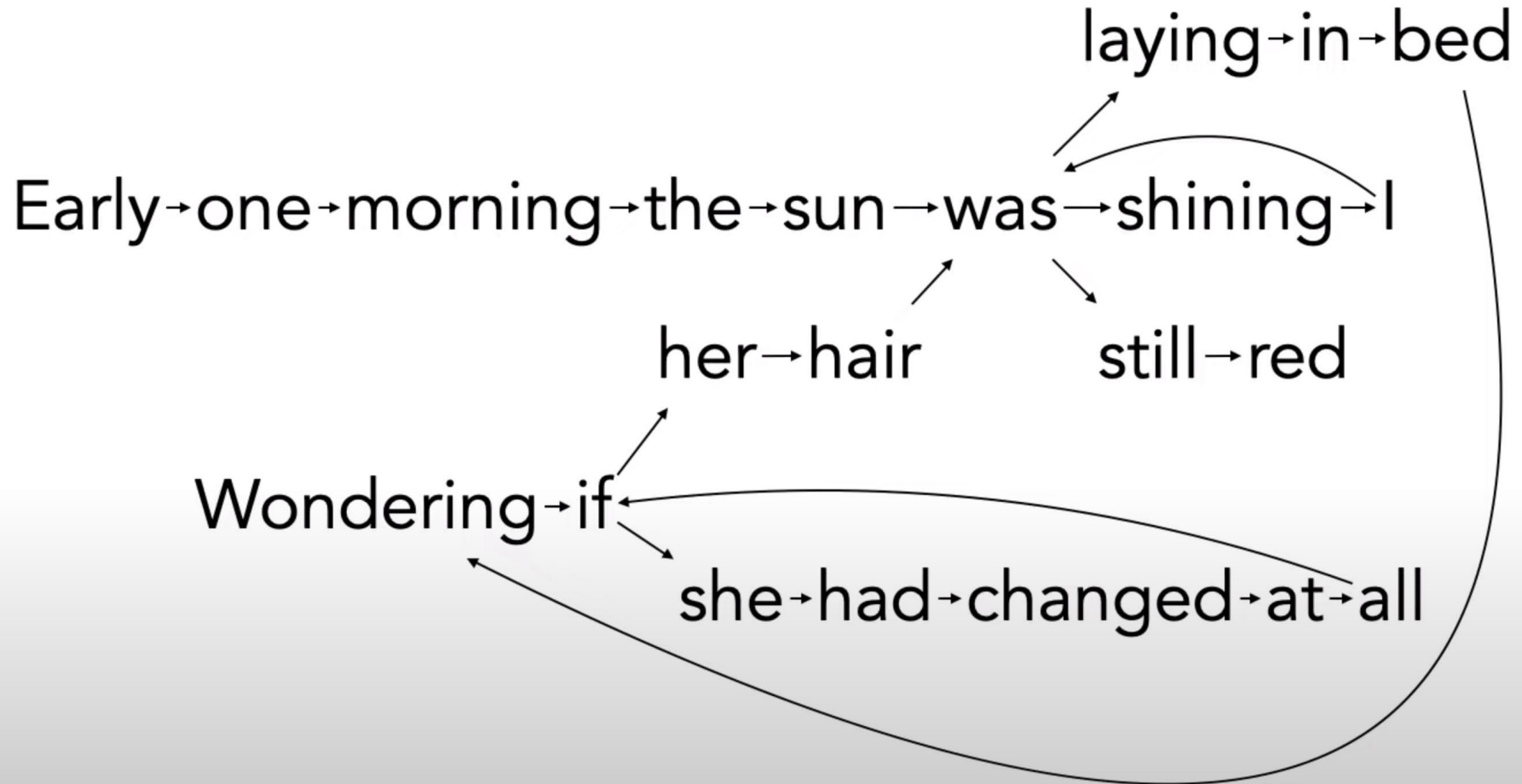
- A probabilistic model that assigns a probability $p(x_1, x_2, x_3, \dots, x_n)$ to every finite sequence $x_1, x_2, x_3, \dots, x_n$ (grammatical or not)

Early one morning the sun was shining I was laying in bed
Wondering if she had changed at all if her hair was still red

Bob Dylan, *Tangled up in Blue*

Language Model

$$p(X_n | X_{n-1})$$



Language Model

$$p(X_n | X_{n-1}, X_{n-2})$$

Early one → morning
one morning → the
morning the → sun
the sun → was
sun was → shining
was shining → I
shining I → was
I was → laying

...


Language Model

$$p(x_1, x_2, x_3, \dots, x_n)$$
$$=$$

$$p(x_1)p(x_2|x_1)p(x_3|x_1, x_2)$$
$$p(x_4|x_1, x_2, x_3) *$$
$$\dots *$$

$$p(x_n|x_1, x_2, \dots, x_{n-1})$$

Conditional
probability



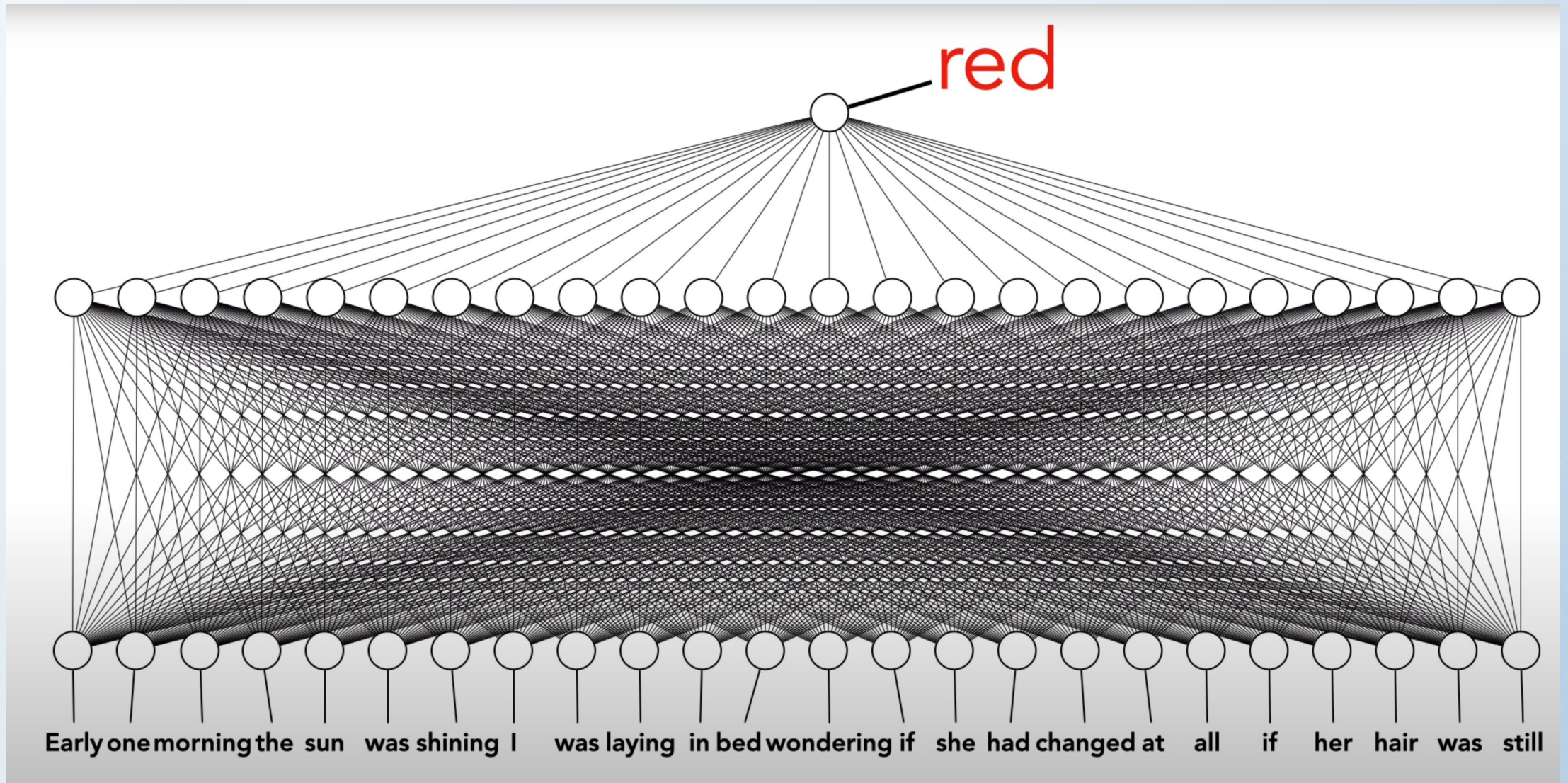
Language Model

Early one morning the sun was shining I was laying in **bed**
Wondering if she had changed at all if her **hair** was still **red**

$$p(X_n | X_{n-1}, X_{n-2}, X_{n-3}, X_{n-4}, X_{n-5}, X_{n-6}, X_{n-7}, X_{n-8}, X_{n-9}, X_{n-10}, X_{n-11}, X_{n-12}, X_{n-13})$$

Too complex to model, so we use neural network to approximate it

Neural network Language Model



Transformer

Early one morning the sun was shining I was laying in bed
Wondering if she had changed at all if her hair was still ?

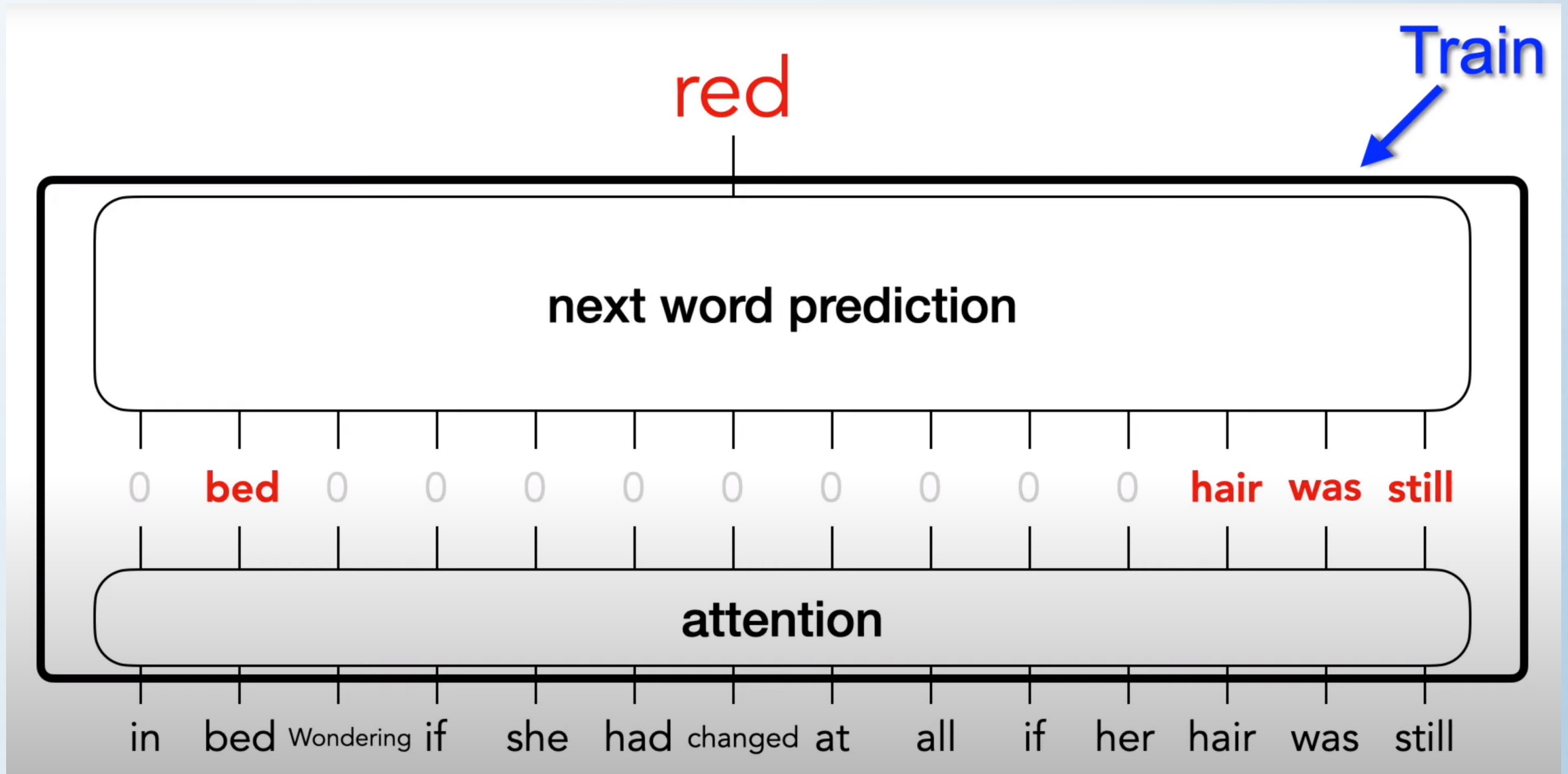
Attention is all you
need!

bed

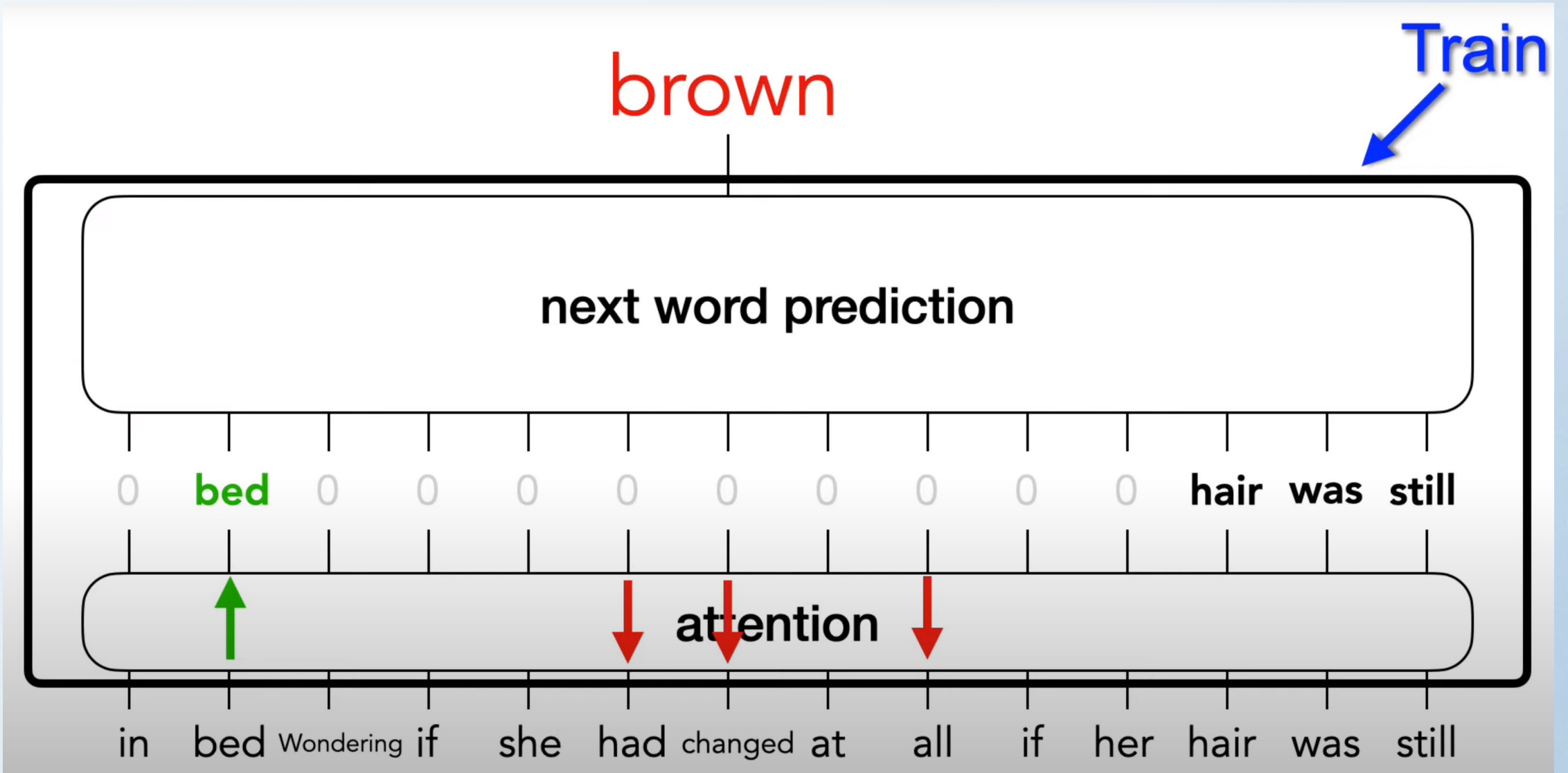
hair was still

A diagram illustrating attention weights. The text 'Attention is all you need!' is written in red. Three blue arrows originate from the word 'Attention' and point to the words 'bed', 'hair', and 'was' in the sentence 'hair was still' below. The word 'bed' is also shown in a separate line above. The word 'still' in the sentence 'hair was still' is underlined with a red line.

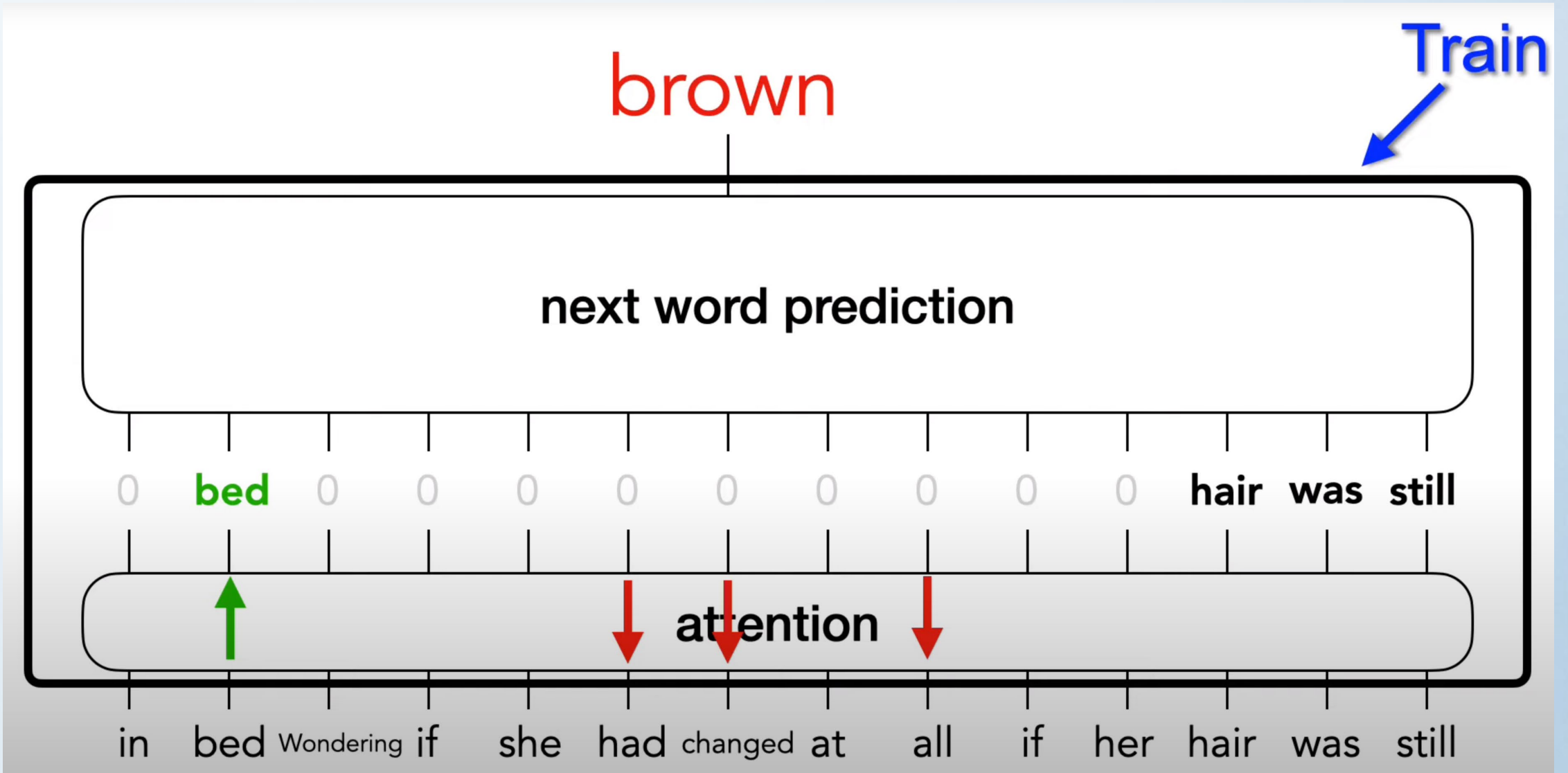
Transformer



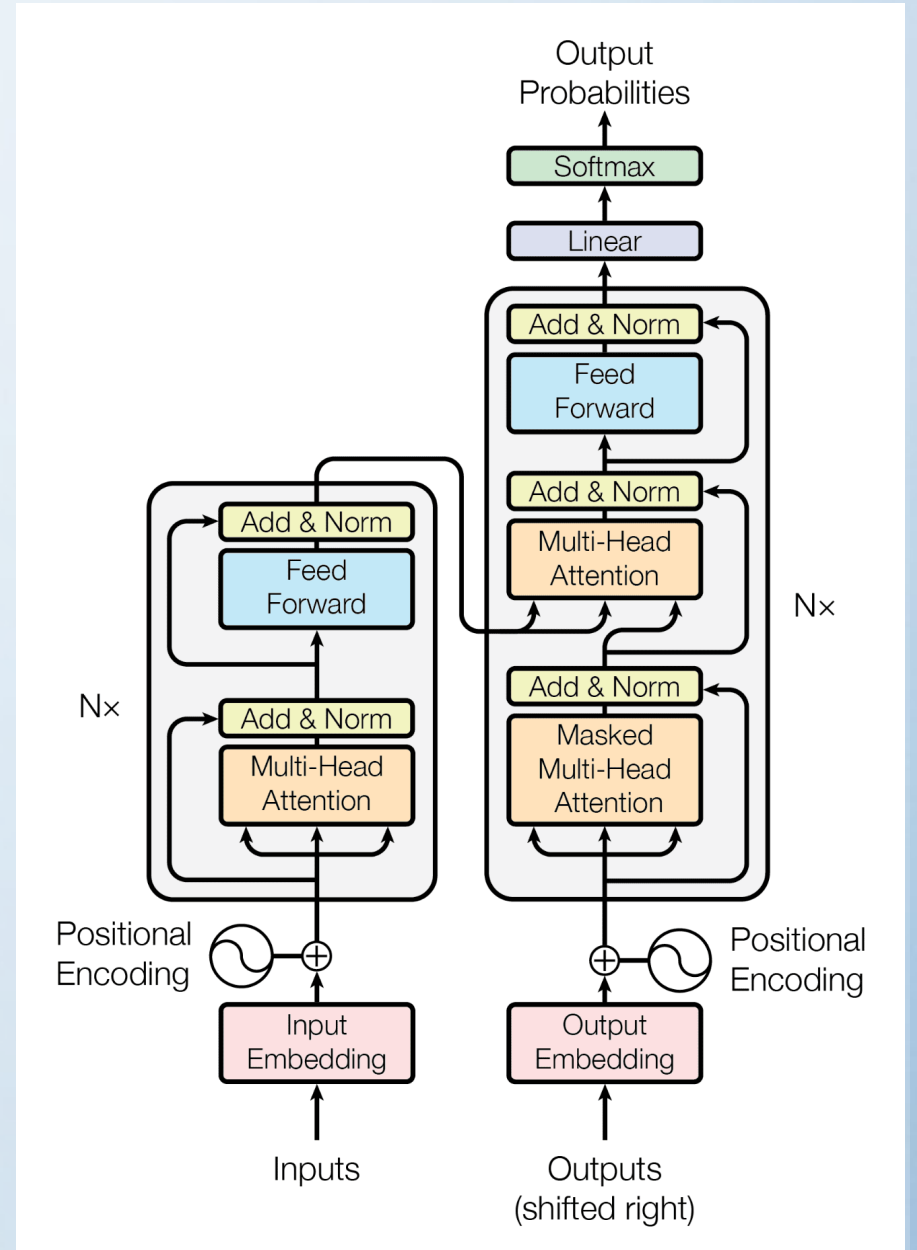
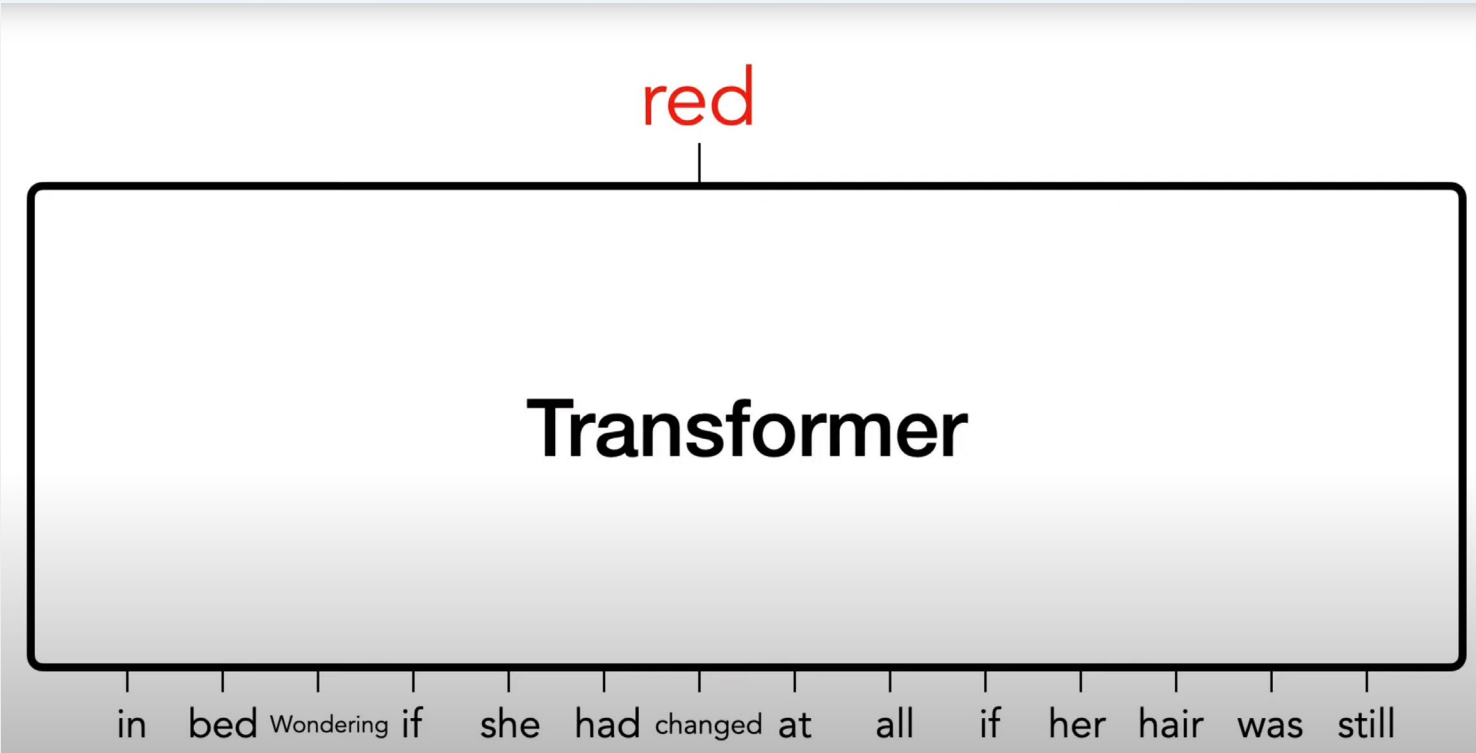
Transformer



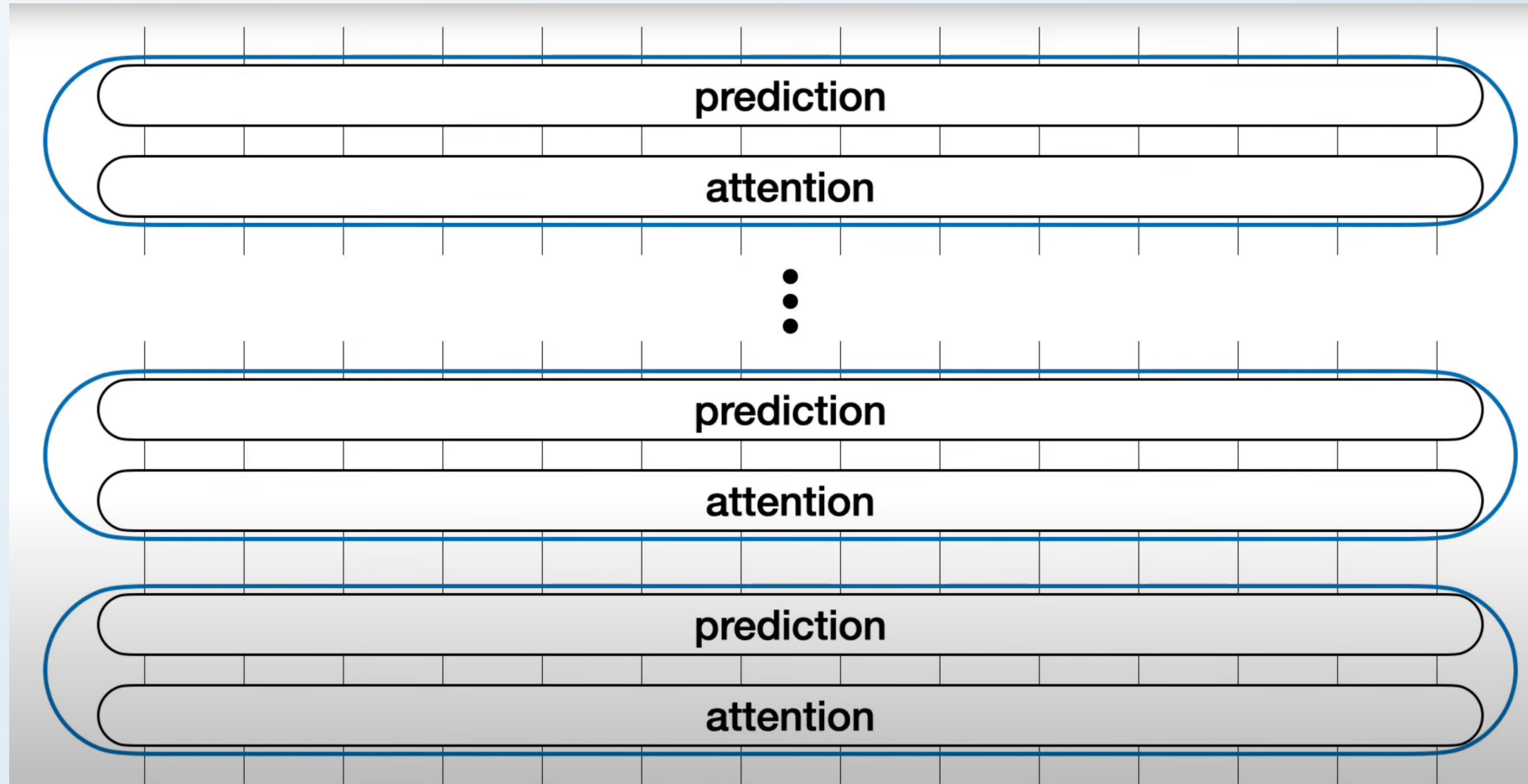
Transformer



Transformer



LLMs





How large are LLMs ?

- Medium-sized models (100M-3B parameters)
- Very large models (100+ billion parameters)
- Larger model sizes \square larger compute, more expensive
- Emergent properties arise from model scale
- Trade-off between model size and corpus size
- Different sizes of LMs have different ways to adapt and use them
 - Fine-tuning , zero-shot/few-shot prompting, in context-learning

Pre-training and adaption

- **Pre-training** : trained on huge amounts of unlabeled text using “self-supervised” training objectives
- **Adaption**: how to use a pre-model for your downstream task?
 - What types of NLP tasks (input and output formats)?
 - How many annotated examples do you have?

Circulation revenue has increased by 5% in Finland. // Positive	Circulation revenue has increased by 5% in Finland. // Finance
Panostaja did not disclose the purchase price. // Neutral	They defeated ... in the NFC Championship Game. // Sports
Paying off the national debt will be extremely painful. // Negative	Apple ... development of in-house chips. // Tech
The company anticipated its operating profit to improve. // _____	The company anticipated its operating profit to improve. // _____
	

<http://ai.stanford.edu/blog/understanding-incontext/>

Ben Mitchell- Yellin

Plagiarism

Old definition: “Plagiarism” means the appropriation and the unacknowledged incorporation of another’s work or idea into one’s own work offered for credit. (SHSU Student Code of Conduct and Discipline, 5.32)

New definition: “Plagiarism” means the appropriation and unacknowledged incorporation in work offered for credit of work or ideas that are not one's own.

What Concerns Reveal about Practices



Assessment vs. Teaching



The “3Ms” of Active Learning

- Makeup
- Methods
- Mindset

Ethical Issues

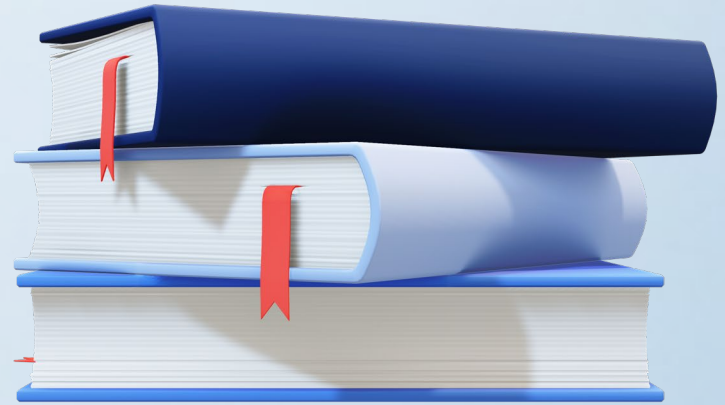
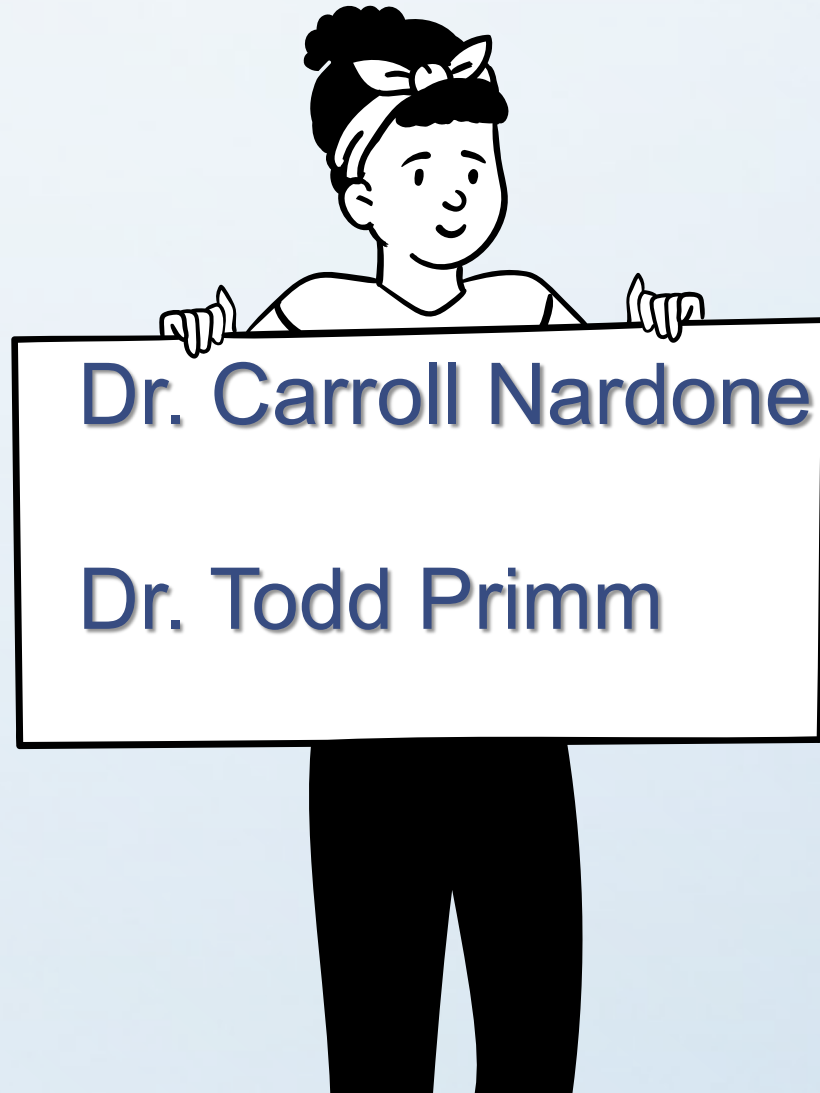
Known Unknowns and Unknown Unknowns

Existential and Other Risks

Writing and Thinking

Academic Freedom

Assignment Making in the Age of AI



Query to the AI: “What are the concerns about Chat-GPT and student writing”

There are a number of concerns related to the use of chatbots and AI-powered tools in student writing, including:

- Lack of creativity: Some argue that the use of chatbots may discourage students from thinking creatively and coming up with their own ideas.
- Limited understanding: Chatbots may have a limited understanding of the subject matter, which can lead to inaccuracies or mistakes in the text they generate.
- Ethical concerns: There may be ethical concerns around the use of chatbots to generate writing, particularly if students turn in work generated by the chatbot as their own.
- Dependence on technology: If students become too reliant on chatbots for writing tasks, they may struggle to complete writing tasks on their own when technology is not available.
- Lack of feedback on writing skills: Chatbots and AI-powered tools may not be able to provide feedback on writing skills such as grammar, structure and style, which may impede the students to improve their writing skills.
- Lack of human touch: Chatbots and AI-powered tools lack the capacity to give an emotional understanding to students. This can sometimes lead to lack of empathy and understanding in the writing.

(Response: 1/11/23 10:15am; our formatting)

- **What can Chat-GPT do effectively (currently)?**

- Summaries
- Computer code
- Rephrasing
- Creating short drafts, MCQ, or discussion questions
- Format genre in a certain style

- **Where is it ineffective?**

- Provides no references and sources (or inaccurate ones)
- Cannot “speak” with “human voice”
- Doesn’t include minority or rare views
- Sees all information as equally congruent and valuable

What concerns me more:

AI tool **Cactus** blatantly advertises to write content for students (including personal statements and creating citations). It is from a company with **eight employees**.

(https://www.cactus.ai/cactus_student) their signup screen



Let's get you an account for the most powerful academic weapon!



Modify your Assignments

Remember that ChatGPT lacks wisdom, factuality, and critical thinking

- **Research papers with required sources:** Request students to incorporate outside sources when possible, and work them directly into their text with in-text citations. These systems struggle with context and research. *ChatGPT will often provide fake sources* if prompted to cite a source.
- **Push your students to formulate a “Point of View”:** Generative AI is the opposite of novel. If you are having them write a paper on a popular text or film, push them to *develop deep opinions and back them up with evidence*. Require a bit of depth, and then watch for repetition. Generative AI will generate repetitive text over deep thought to fulfill a length requirement.
- **Ask students to explain their process:** Rather than submitting only a final “product”, consider requesting students to document their workflow and explain their choices they made throughout their essay.
- **Have students reflect on unique course experiences:** if you have guest speakers or could easily incorporate them, have students reflect on the guest speaker. ChatGPT won't know what happened in your classroom or in that recorded lecture.
- **“Reverse Research Paper”:** Provide students with the “conclusion”/argument, which that lacks research/references/defense. Ask them to build the reference support. Build references list and add in-text citations to the submission. A reverse research paper.

SHSU - NGL – *Erin Owens*

Just confirming that the resource guide is published and should contain pretty much all the links that the group sent me during planning for tomorrow's event. The LINK is ready to be shared 😊

<https://shsulibraryguides.org/ai>

Student Approaches to Using AI: A Pilot Study

Kristin Bennett, Ph.D., & Brandon C. Strubberg, Ph.D.
Department of English

Pilot Study on Student Use of AI

- **Goal:** initial insights into how students encounter and use AI and refine methods for future study to prepare students for using similar AI in professional sphere.
- **Participants/data collection:** *recruited five participants* using convenience sampling & used pre- and post-test interviews, think-aloud protocol, and research observations to analyze data.
- **Participatory design:** a democratizing process that seeks to engage participants as collaborators in the research protocol (Harrington, Erete, & Piper, 2019).
- **Procedure:**
 - Participants used AI freely without prompting to learn more about how the chatbot works.
 - Participants then completed a task based on technical communication assignments using AI.
 - Researchers prompted participants to input entire assignment into AI, if they did not do so on their own.

Findings

- **Knowledge of ChatGPT influenced students' initial use of the platform.**
 - **Participant 5:** “Right now, I am working on developing new-employee onboarding training and am having trouble determining the best medium. Can you give me information about various media for employee training modules?”
- **Prompts affected how students used the technology.**
 - **Participant 3** worked to refine the memo that ChatGPT generated for him, instructing the chatbot to make the memo “more creative and smart.”
- **Participants commented on ethical implications of using ChatGPT for academic and/or professional writing.**
 - **Participant 1** stated that it was not specific or accurate for her needs and said that it was unethical to use “because you don't learn anything from it. You just copy and paste whatever it gives to you.”
 - **Participant 3** claimed ChatGPT was “a massive cheat code” and said he would not use it, because he did not believe it would not reflect him as a writer or person.
 - **Participant 2** said she might use it to generate ideas and provide models for a specific genre.
 - **Participant 5** believed it could help novice or ESL writers “play with the English language” and become more comfortable using language through it. She planned to use it for low-stakes writing assistance for herself.
 - **Participant 4** was uncertain if using the chatbot would be considered plagiarism and asked researchers if it would.

Steps Forward

- Intentional recruiting of participants
- Refining interview questions to promote unanticipated responses.
- Encouraging both experimentation & prompted use of AI.
- Including a range of prompts.

Thanks!



If ? please contact us:

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AI, contract cheating, and plagiarism..oh my!

Academic Integrity Committee Update

Spring 2023



Academic Dishonesty (unfortunately) continues to evolve

- We used to only worry about a student looking over to another student's test, hiding answers on an arm, or getting their friend's paper for resubmission
- Cheating and academic dishonesty have become much more sophisticated





SHSU recognizes there is an issue...

- **Fall 2019:** Associate Dean Workgroup (Dr. Anne Gaillard, Dr. Mari Hopper, Dr. Glenn Sanford, & Dr. Ryan Zapalac) and SHSU Online
- **Fall 2020:** Academic Integrity Workgroup (Dr. Jannah Nerren (Chair), Dr. Danielle Boisvert, Dr. Jamey Crosby, Ms. Stephanie Fors, Dr. Shani Robinson, Dr. Courtney West, & Dr. Ryan Zapalac)
 - [Honor Code](#) and [H.O.N.O.R. video](#)
- **May 2021:** Survey goes out to faculty to discover academic integrity issues
- **December 2021:** AI Workgroup recommends formation of a standing university-level Academic Integrity Committee (AIC)
 - Includes a faculty member from each college (8 total), 1 staff member from Student Affairs, 1 staff member from IT/SHSU Online, and 1 administrator
 - Approved by the Provost and began operation in Fall 2022

How we are responding

- The AIC immediately began working on resources that will help promote academic integrity throughout the university:
 - Joined the [International Center for Academic Integrity \(ICAI\)](#) – one of 4 Texas members
 - Partnership with TurnItIn – [SHSU Resources Microsite](#)
 - Development of an Instructor Resource Platform that will be deployed through Blackboard – topics would include:
 - Artificial Intelligence (ChatGPT, DALL-E, etc.)
 - Contract Cheating (social engineering)
 - Plagiarism
 - Use of Apps (Group Me, Photo Math, etc.)
 - Web-based services (Chegg, Course Hero, etc.)
 - Working with Dr. Amy Salazar and Dr. Aneika Simmons for both the student and faculty success pieces



The image is a screenshot of a web page from Turnitin's Feedback Studio. At the top left, there are logos for Turnitin and Originality. A "Share" button is in the top right. The main content area features the "feedback studio" logo on the left and a text block on the right. The text block is titled "Emerging Trends in Academic Integrity and the Challenges for HED Institutions" and contains a paragraph of text about new challenges in the education landscape. Below the text block, there is a "Thank you!" message from Alynda. Underneath, there is a "Related Documentation" section with a short paragraph. At the bottom, there is a row of five document thumbnails, each with a title and a small image. The titles are: "Emerging Trends in Academic Integrity", "Everything you need to know about contract cheating", "Strategies and tactics for spotting contract cheating", "International Center for Academic Integrity", and "Why academic integrity is essential to your institution's strategic vision".

Artificial Intelligence is the “topic du jour”

- CBS Sunday Morning Segment – ChatGPT (AI) (8:02) - <https://www.youtube.com/watch?v=2MZs44gSlwg>
- The impact of artificial intelligence on teaching, learning and assessment practices (provided by TurnItIn partner) (24:21) - https://www.youtube.com/watch?v=zNC_-lbtWoc
- ChatGPT Just Got Better: What Does That Mean for Our Writing Assignments? (Mills, 2023) - Article on COHE
 - Beta tester for the software with interesting insights

ChatGPT is at capacity right now

[Get notified when we're back](#)

Write a rap about the status of ChatGPT.

Yeah, yo, what's up ChatGPT fam
A lot of people trying to jam
But don't worry, we got your back
Just check back soon, we'll get on t



Takeaways from the Mills (2023) article...

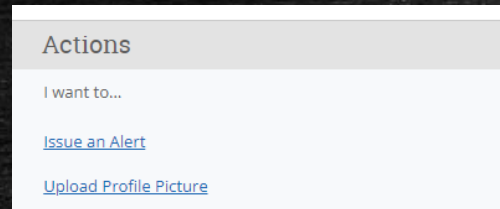
- It's a dead end to focus on designing prompts that AI won't be good at
- Don't depend on multimedia assignments to evade AI for long
- Don't depend on genres like personal narrative and metacognitive reflection to prevent students from using AI
- Don't assume that if AI can do something, it's not worth assigning
- It may be more and more difficult to distinguish AI prose from student writing:
 - Detection software is nascent
- Focus on motivation and the writing process itself:
 - Assign writing that is as interesting and meaningful to students as possible
 - Communicate what makes the process of writing valuable
 - Support the writing process
 - Focus on building relationships with students as a way to help them to stay engaged
- PACE:
 - Writing in the Disciplines Program



Other projects

- Improving the reporting process to the Dean of Students Office
 - a. [APS 810213 - Procedures in Cases of Academic Dishonesty](#) and [Student Code of Conduct, Section 5.36](#)

b. Campus Connect option



Actions

I want to...

[Issue an Alert](#)

[Upload Profile Picture](#)

- Educational campaign targeted towards students:
 - [Honor Code](#) at forefront
 - Best practices regarding aforementioned concerns
- [A.I. and the Researcher: ChatGPT and DALL-E in Scholarly Writing and Publishing \(Jan 2023\)](#)





More to come soon!

Please reach out to us if we can ever be of service!

Ryan Zapalac (rkz001@shsu.edu) – Acting Chair

Hatem Elshabrawy (hxe007@shsu.edu) – Chair-Elect