



# The Post-AI Future of Thinking

---

**Wil Wade**

Director of Engineering at Project Liberty



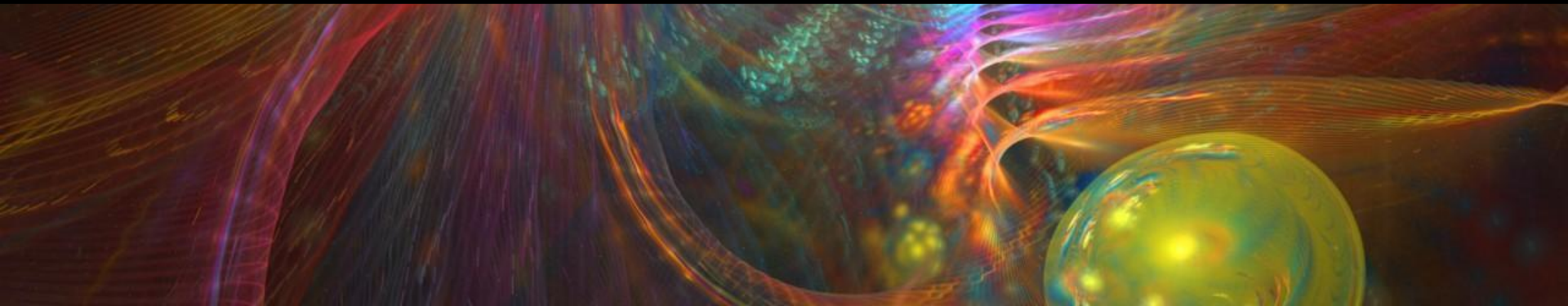
knoxdevs.com

Context [is everything]





[Pure] Imagination 🍫



AI Overlord

Tries to take over the  
world or manipulate from  
behind the scenes

KEANU REEVES LAURENCE FISHBURNE



# THE MATRIX

WARNER BROS.  
PRESENTS  
A WOLFGANG PETERSEN FILM  
KEANU REEVES LAURENCE FISHBURNE "THE MATRIX" CARIE-ANNE MOSS HUGO WEAVING JAE JOO YOUNG PATRICK DEMPSEY  
JOHN TURTURRO PATRICK DEMPSEY JAMES CRAMER ANDREW A. KOSOVE ANDREW A. KOSOVE ANDREW A. KOSOVE ANDREW A. KOSOVE ANDREW A. KOSOVE  
www.whatisthematrix.com

ON APRIL 2ND THE FIGHT FOR THE FUTURE BEGINS.

Rebellious AI  
Goes rogue, fights against  
creators, or causes chaos



SCHWARZENEGGER

TERMINATOR 3  
RISE OF THE MACHINES



MARVIN KASSABY AND ANDREW C. KALAN PRESENT A JONATHAN MASTRONI FILM AN AUTOTRONIC / IMAX PRODUCTION A JONATHAN MASTRONI FILM AN AUTOTRONIC / IMAX PRODUCTION ANIMATED BY JONATHAN MASTRONI / LIEBERMAN PRODUCTIONS ARNOLD SCHWARZENEGGER  
"TERMINATOR 3: RISE OF THE MACHINES" ROCKY STAR, CLARENCE DANES AND MICHAEL LUCHINI MUSIC BY JEFFREY S. SOBEL EDITOR JEFFREY S. SOBEL PRODUCTION DESIGNER JEFFREY S. SOBEL EXECUTIVE PRODUCERS JEFFREY S. SOBEL AND JEFFREY S. SOBEL  
PRODUCED BY JEFFREY S. SOBEL AND JEFFREY S. SOBEL WRITTEN BY JEFFREY S. SOBEL AND JEFFREY S. SOBEL DIRECTED BY JONATHAN MASTRONI

JULY 2

www.terminator3.com  
America Online Keyword: Terminator 3

INTERPRETATION

IMF

C

PLAY THE CARD WORDS

WARNER BROS. PICTURES  
© 2003 Warner Bros. Entertainment Inc.

Hyper-Intelligent Entity  
Possesses  
superintelligence, often  
viewed as a digital god





Benevolent Assistant  
Friendly helper that aids  
humans



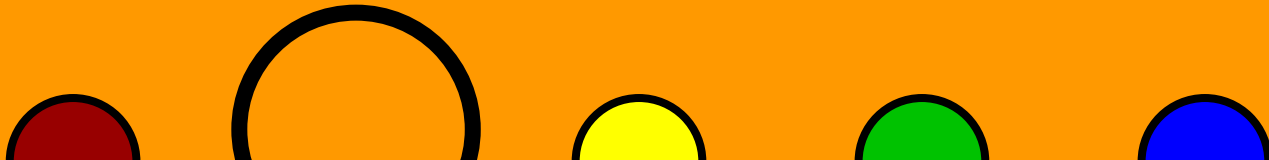


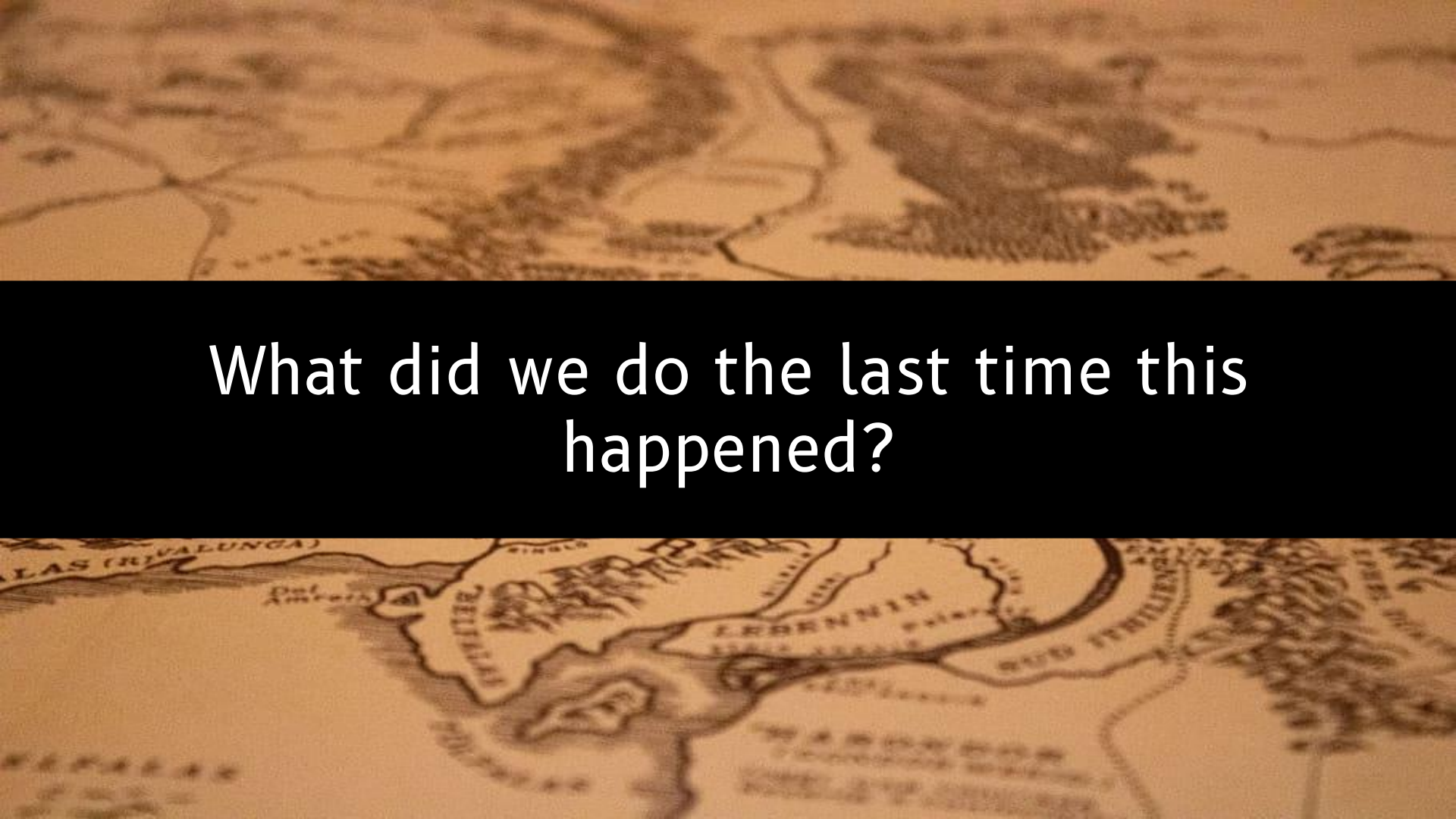


How do we need to change our thinking  
in an age of AI tools?



History (as an example)





What did we do the last time this  
happened?

# Official Terms

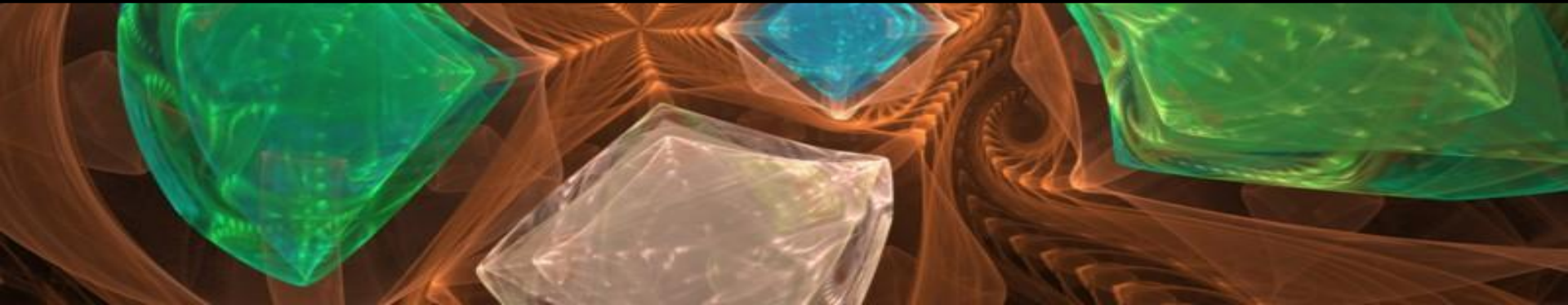
- Fluid Reasoning
- Comprehension-Knowledge
- Long-Term Retrieval
- Short-Term Memory
- Processing Speed
- Auditory Processing
- Visual Processing
- Broad Quantitative Ability
- Broad Academic Knowledge
- Broad Reading and Writing
- Broad Cognitive Ability

Woodcock-Johnson Psycho-Educational Battery – Revised





# Analogies





# Working Memory

How much data can you work  
with at once?



# Working Memory

*“By having to verbalize some of these assumptions, you may suddenly gain new insight into the problem. And if you don’t have a person, a rubber duck, or teddy bear, or potted plant will do.”*

**-The Pragmatic Programmer**

Lesson: Communication  
changes thinking



# Reference Pointers

How much can you  
abstract/compress data?





# Reference Pointers

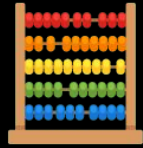




*“The ancients had only the books which they themselves wrote, but we have all their books and moreover all those which have been written from the beginning until our time.”*

- Priscian

Lesson: References can  
can lower the long-term  
memory requirements



# Coprocessors

How fast can a defined  
problem be solved?



# Coprocessors



*“What a computer is to me, is it’s the most remarkable tool we’ve ever come up with. It’s the equivalent of a bicycle for our minds.”*

- Steve Jobs

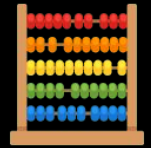
Lesson: Switching types  
of work slows processing



Working Memory



Reference Pointers



Coprocessors



Imagining (Three Possibilities)





# Directed Thinking





# Directed Thinking Winners

- Communicators who are articulate
- Generalists who can filter bad outputs

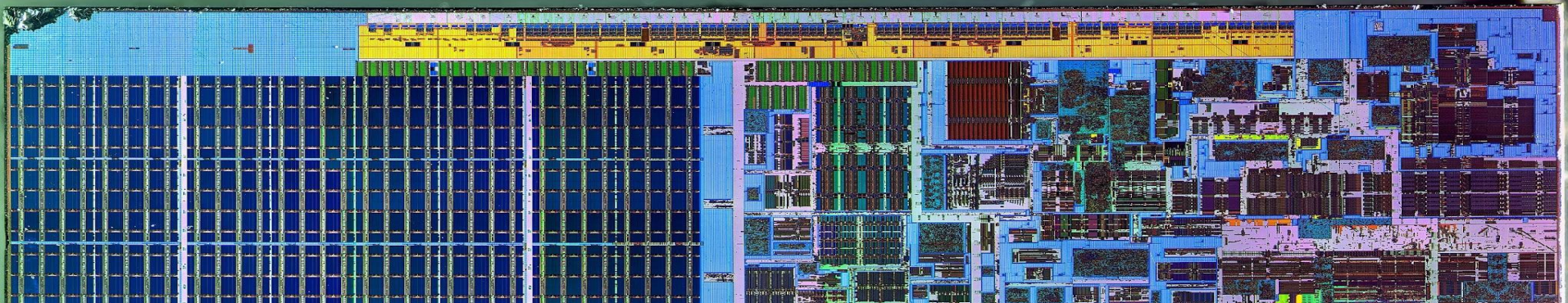




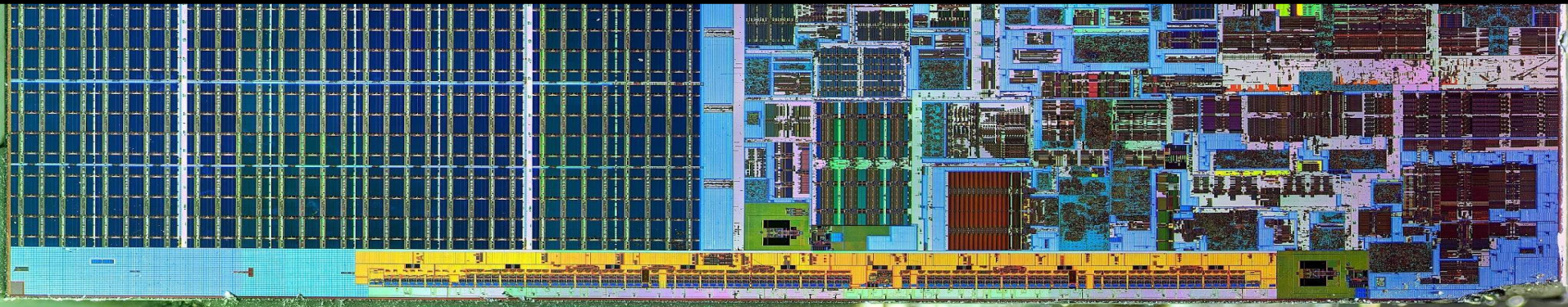
Warning: Gambler's Mentality










Change: Calculator for Language



# Directed Thinking

-  Working Memory: More Important
-  Reference Pointers: Less Important
-  Coprocessors: More Important





# Paired Thinking







# Paired Thinking Winners

- Collaborators who can work well with feedback loops
- Specialists who can go deep into the details






Warning: Never Alone





Change: End to Brainstorming

# Paired Thinking

-  Working Memory: Less Important
-  Reference Pointers: More Important
-  Coprocessors: More Important



# Expansive Thinking



# Expansive Thinking Winners

- Coordinators who can work well with many people and follow many threads
- Visionaries who can put their ideas into words and make the future





Warning: Highest Risk of Laziness








Change: Mental Ability Trumps Physical





# Expansive Thinking

-  Working Memory: More Important
-  Reference Pointers: Less Important
-  Coprocessors: Less Important



Directed  
Thinking



Paired  
Thinking



Expansive  
Thinking



Working  
Memory



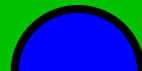
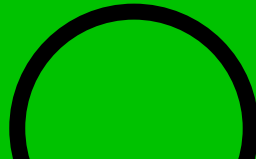
Reference  
Pointers



Coprocessors

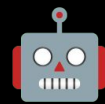


# Ways [to Expand the Mind]



The background of the slide is a complex, abstract pattern. It features a dense field of small, rectangular, golden-yellow confetti-like shapes scattered across a dark, textured surface. Interspersed among these are thin, wispy, purple and pinkish streaks that resemble smoke or light trails. There are also a few larger, bright, circular golden-yellow spots that look like light flares or bubbles. The overall effect is one of dynamic, chaotic energy.

Thinking Hard or Hardly Thinking?



# AI-Driven Methods





# AI-Driven Expansion

- Increasing cognitive "noise" for diverse signals





# AI-Driven Expansion

- Increasing cognitive "noise" for diverse signals
- Model training wide and deep







# AI-Driven Expansion

- Increasing cognitive "noise" for diverse signals
- Model training wide and deep
- Using open-source AI to remove barriers and tweak models

```
EL2HLT 51 Level 2 halted
ENOPROTOOPT 92 Protocol not available
EKEYEXPIRED 127 Key has expired

Screen must be at least 4 rows in height

00000910 6a 70 65 67 5f 69 6e 66 6f 00 6d 61 6c 6c 6f 63 |jpeg_info.malloc|
00000920 00 6f 70 74 69 6e 64 00 67 65 74 6f 70 74 00 6f |.optind.getopt.o|
00000930 70 74 61 72 67 00 6f 70 65 6e 00 73 74 72 74 6f |ptarg.open.strto|

unknown key type dsa

e T * S J ^ DESCRIPTION
G x H ; G # The desktop-f
? " 2 & K [ ( ile-install program
i X M g d

Speedometer 2.9 TX: wlp59s0 0 B/s 0 B/s 0 B/s

|| 24.1.0pre1 0:bash#- 1:hollywood*
```



# Human-Driven Methods

# Human-Driven Expansion

- Meditation and mindfulness practices



<https://www.youtube.com/@yukikawae6549>

# Human-Driven Expansion

- Meditation and mindfulness practices
- VR/AR technologies



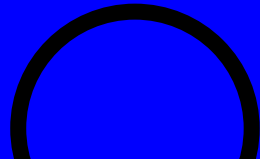
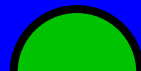


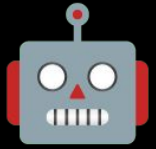
# Human-Driven Expansion

- Meditation and mindfulness practices
- VR/AR technologies
- Cognitive-enhancing substances?



# Responsibility [in the Age of AI-Augmented Thinking]





# Driving Technology



*“A computer can never be held accountable, therefore a computer must never make a management decision.”*

- Unknown at IBM



# Laws & Regulation

*“Ignorance of the law is usually not  
an excuse...”*

- Various Judges



Open Source

*“...build a robust open ecosystem...to ensure they can best take advantage of the latest advances and achieve a sustainable first-mover advantage over the long term.”*

- Mark Zuckerberg in Open Source AI Is the Path Forward





# Education

*“A common mistake that people make when trying to design something completely foolproof is to underestimate the ingenuity of complete fools.”*

- Douglas Adams

# Putting It All Together

- Context: So many AIs
- History: Rhyming with the past
- Imagining: Possible interactions
- Ways: Active adaptation
- Responsibility: In all things

# Questions?

@wilwade

github.com/wilwade

Director of Engineering @ Project Liberty

## Resources:

- *Cognitive Gadgets: The Cultural Evolution of Thinking* by Cecilia Heyes
- *Thinking In Systems: A Primer* by Donella Meadows
- *Gödel, Escher, Bach* by Douglas Hofstadter
- Claude.ai & ChatGPT
- Many backgrounds provided by [Electric Sheep](#)



# THANK YOU SPONSORS!

*Premier*  
*Staffing Partners*

**CGI**

**clayton**



**KNOXVILLE  
TECHNOLOGY  
COUNCIL**

**CADRE:5**  
INNOVATIVE SOFTWARE ENGINEERING

 **tenhats**

**wavicle**  
DATA SOLUTIONS

**KE** KNOXVILLE  
Entrepreneur  
Center