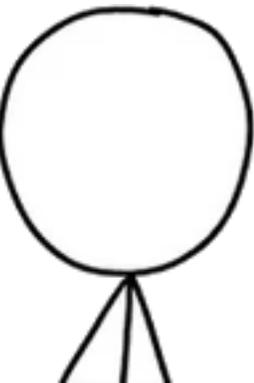




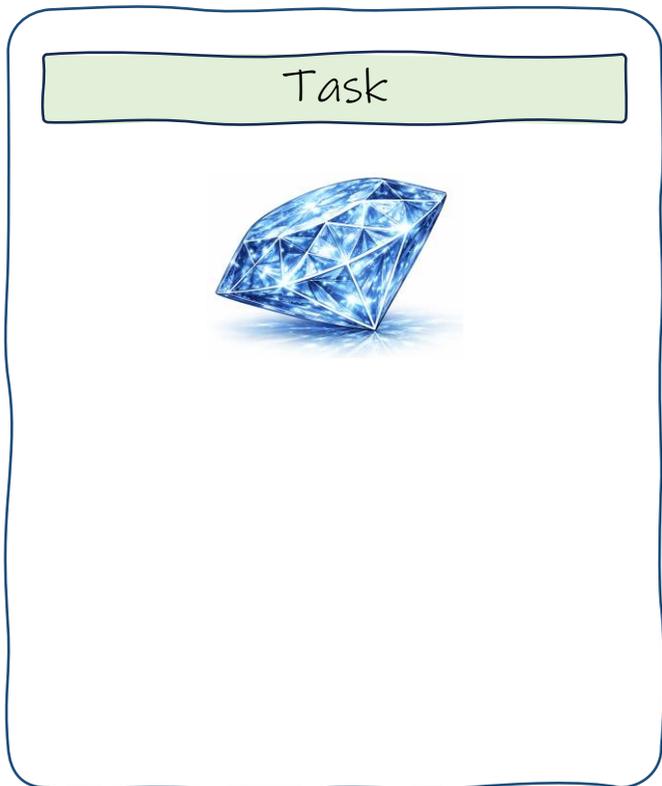
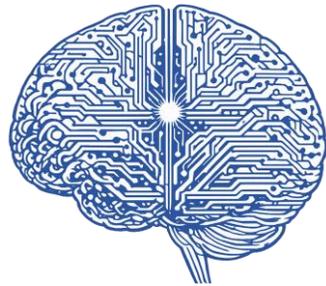
Core Patterns for Coding with AI

Lada Kessler

What results are you getting when working with AI?



Good Results

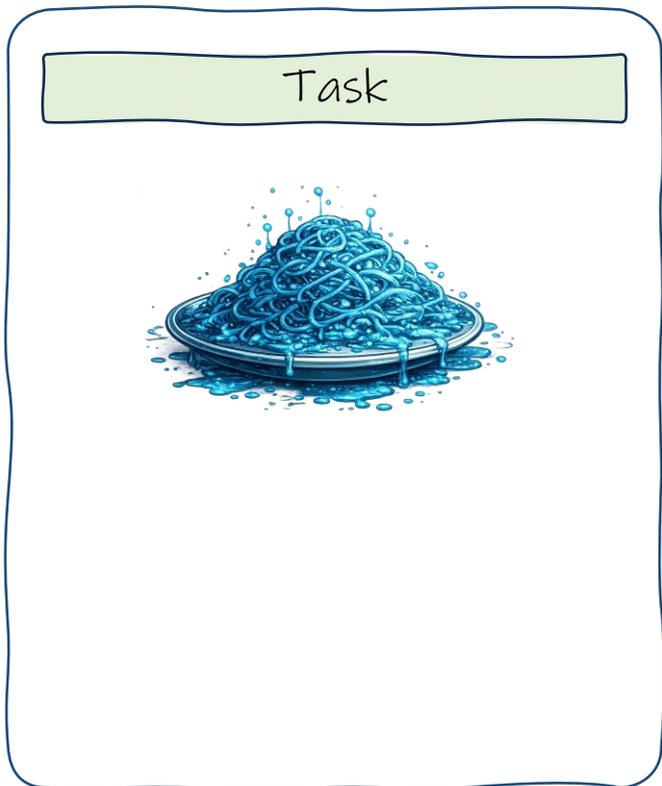
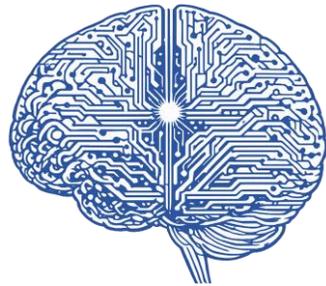


Task



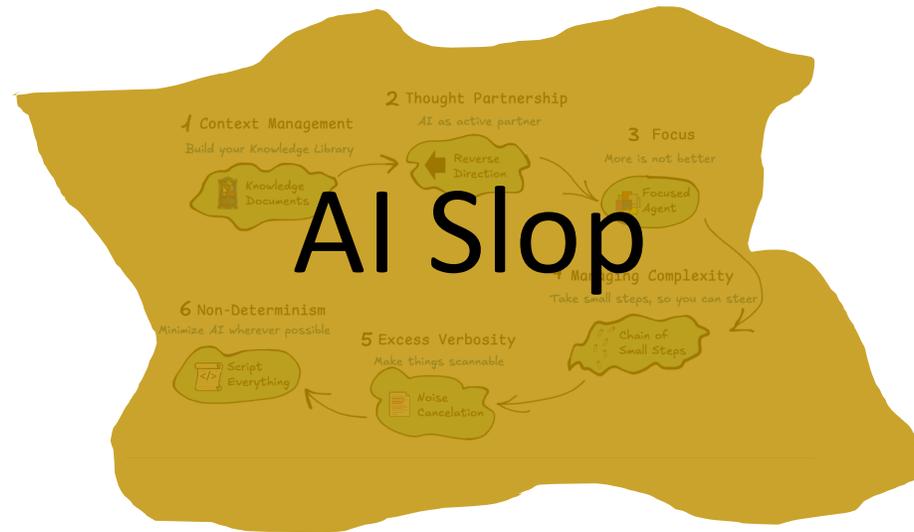
Context window

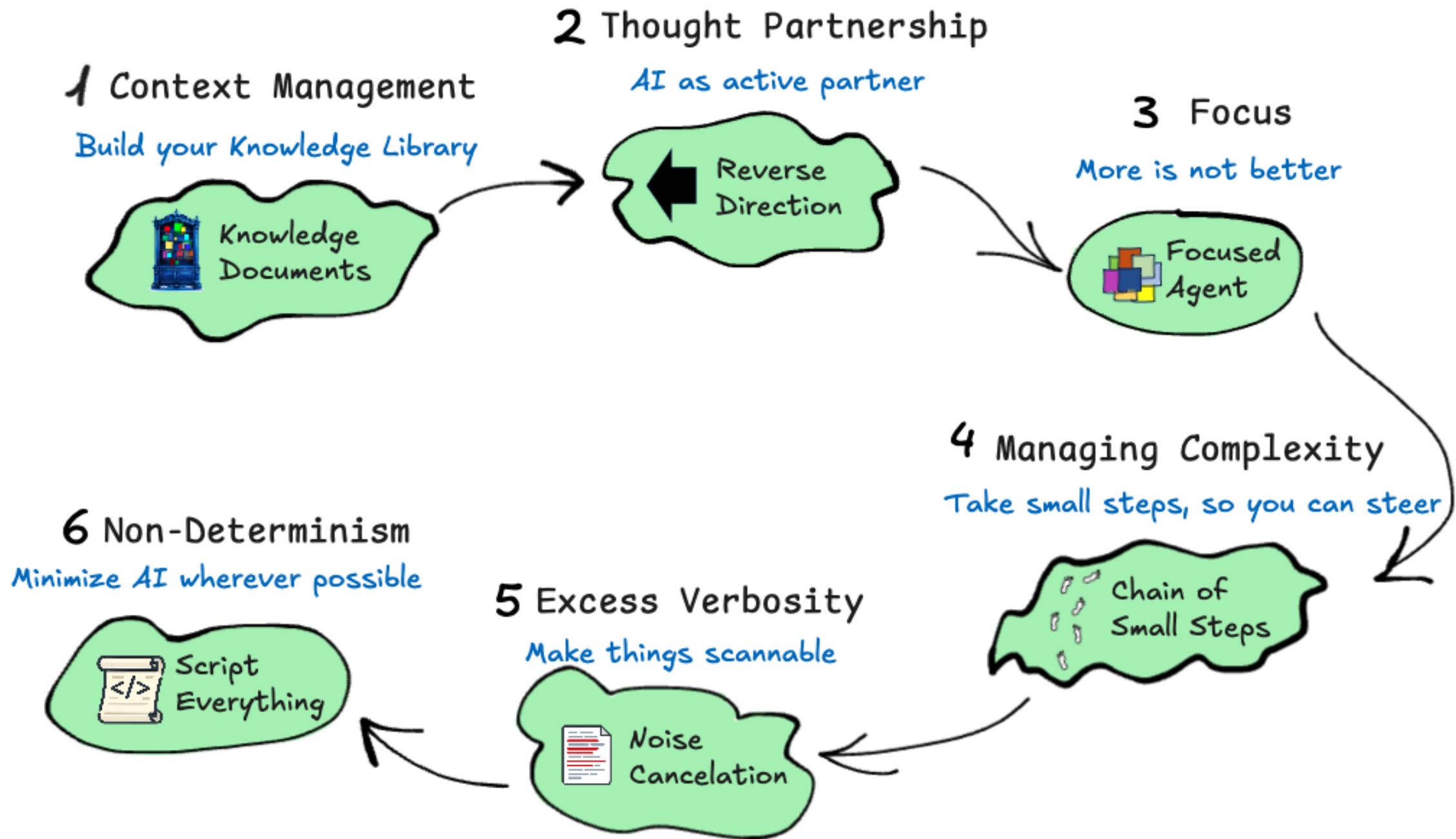
Bad Results



Context window

AI Slop



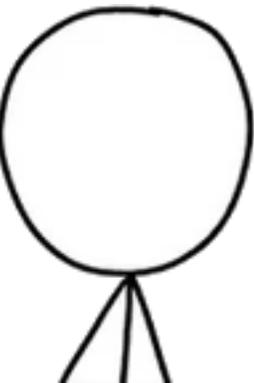


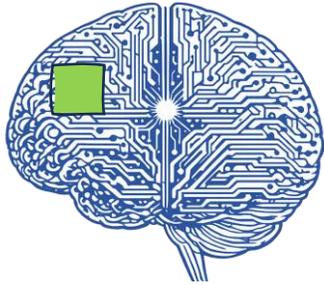
Resources



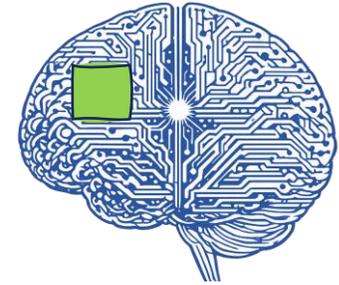
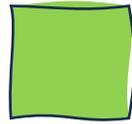
https://github.com/lexler/Talks/blob/main/core_patterns_for_coding_with_ai.md

Why are we getting bad results?





Relevant Knowledge



Task A

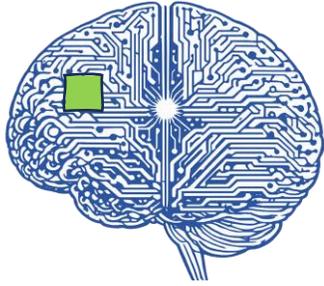


Context Window

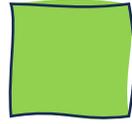
Task B



Context Window



Relevant Knowledge



Task B



More instructions

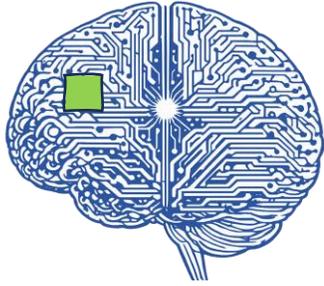


More instructions

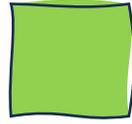


Context Window





Relevant Knowledge



Task B



More instructions

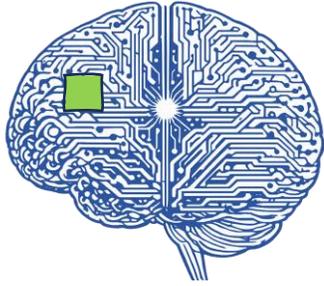


More instructions

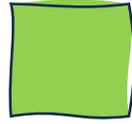


Context Window





Relevant Knowledge



Task B



More instructions



More instructions



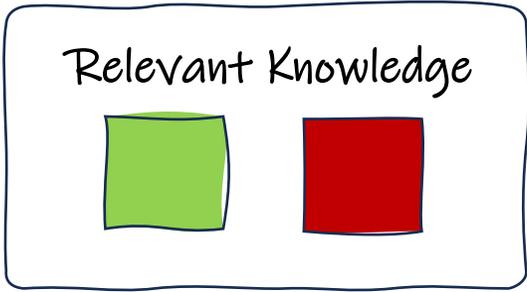
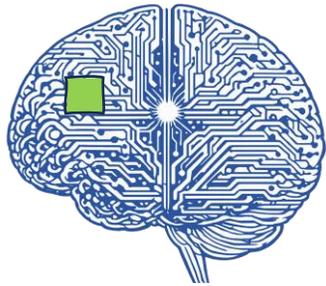
Context Window







Knowledge Documents

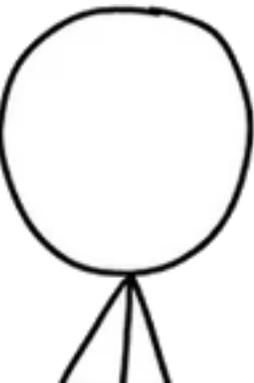


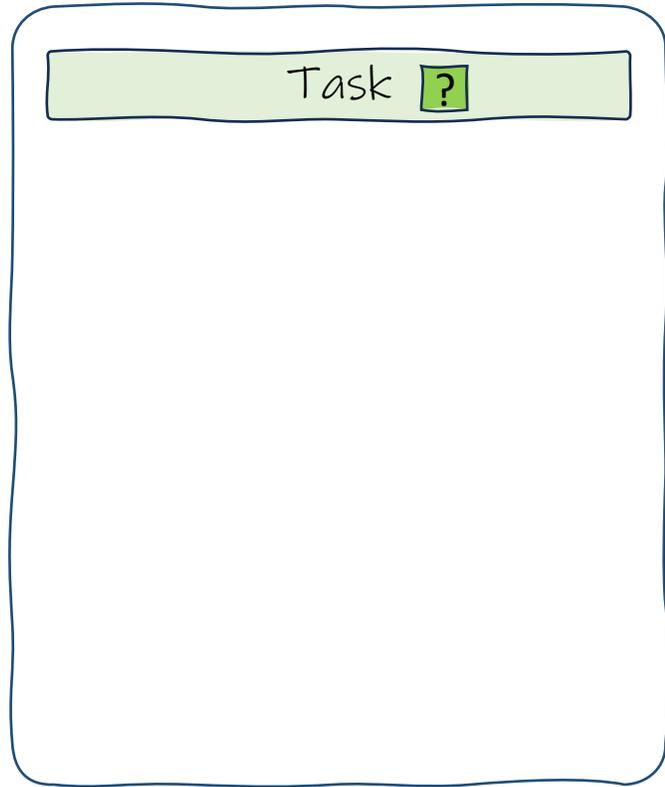
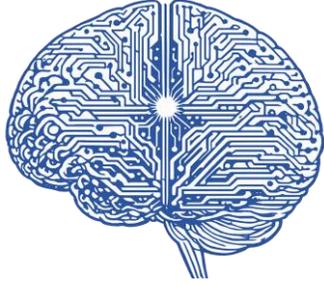
History

TODO.md

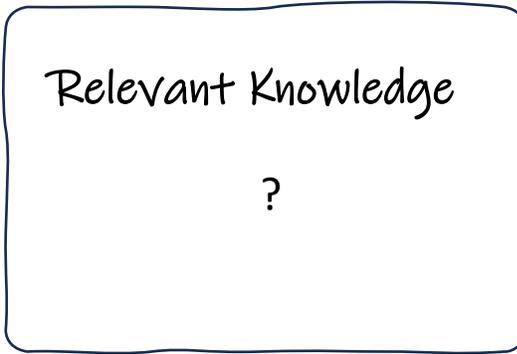
CLAUDE.md

Is there a way to know what knowledge it needs?





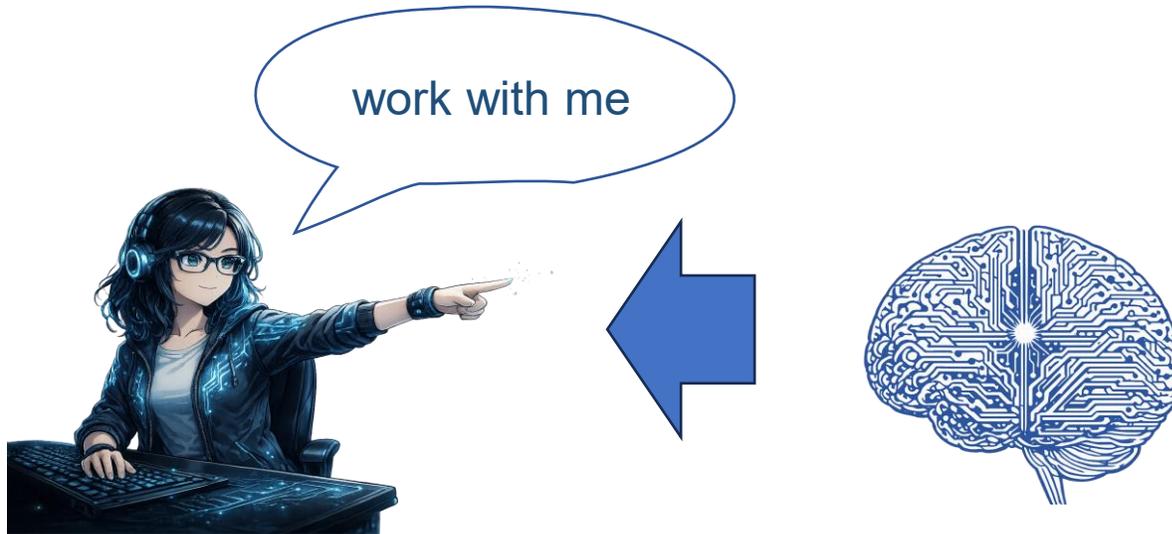
Context Window



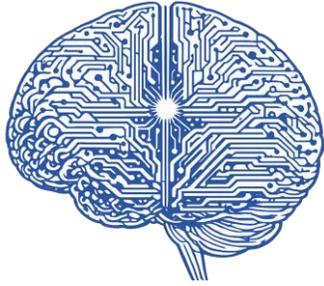
Relevant Knowledge

?





Reverse Direction



Relevant Knowledge

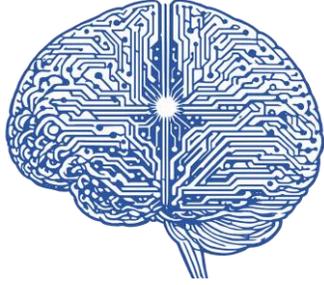


Task ?

Ask me anything unclear



Context Window



Relevant Knowledge

?

Task ?

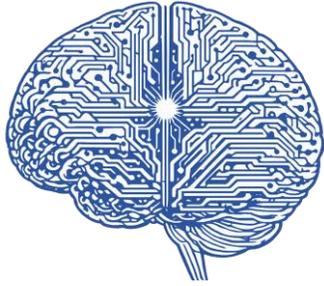
Tell me what you plan to
do before you do it

1

2

4

Context Window



Task ?

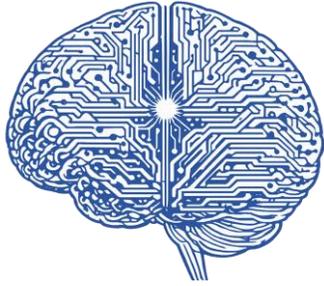
Tell me what you plan to do before you do it

1
2
3
4

Context Window

Relevant Knowledge

3



Relevant Knowledge

?

Task ?

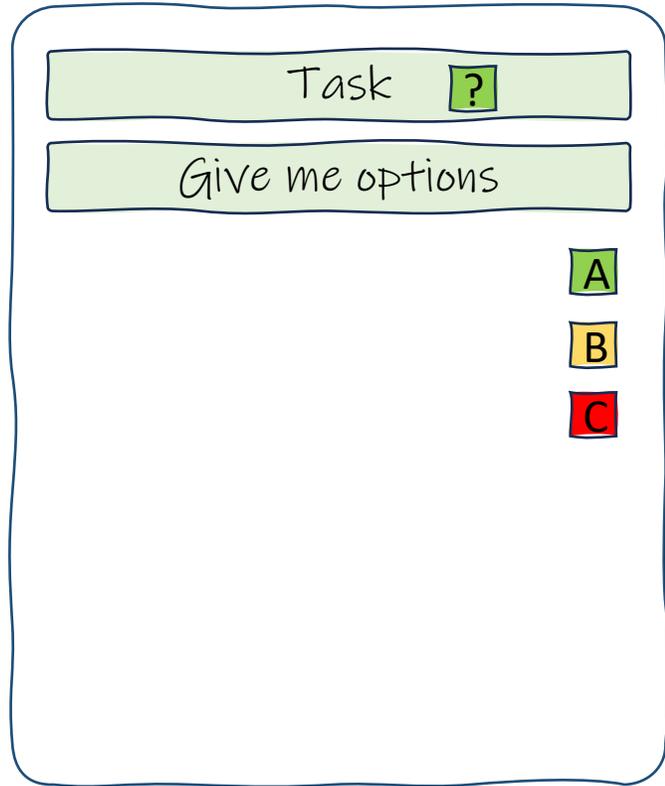
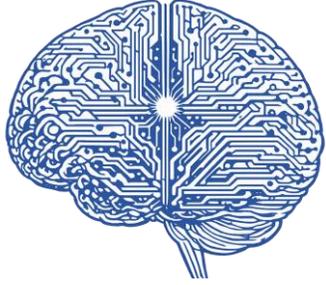
Give me options

A

B

C

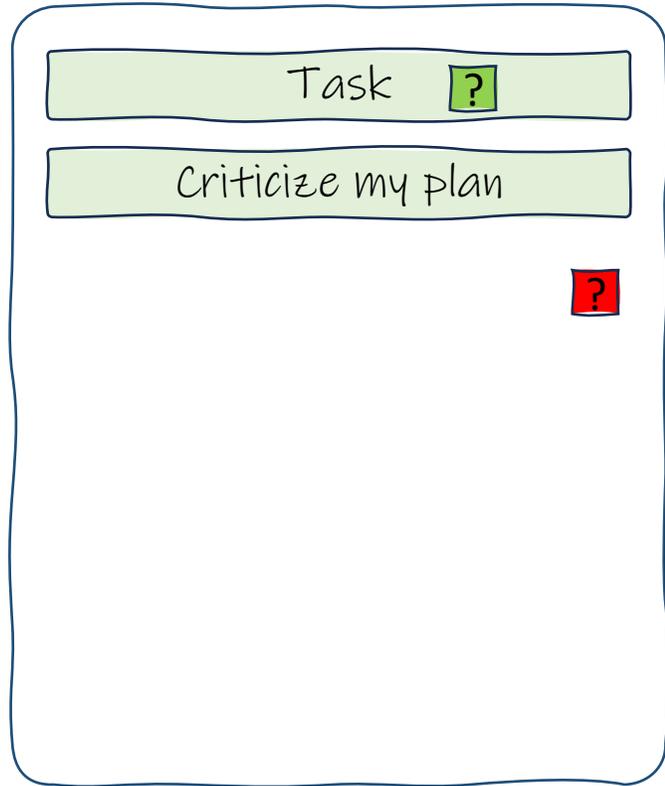
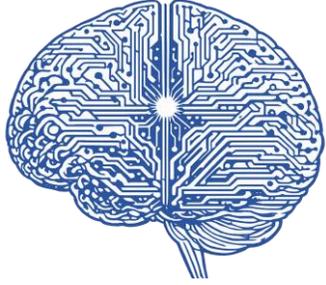
Context Window



Context Window

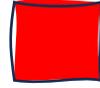
Relevant Knowledge

use
B



Context Window

Relevant Knowledge



- **Ask me** anything **unclear**
- Tell me what you **plan** to do, **before** you do it
 - Give me **options**
 - **Criticize** my plan



Reverse Direction

1 Context Management

Build your Knowledge Library



2 Thought Partnership

AI as active partner



3 Focus

More is not better



4 Managing Complexity

Take small steps, so you can steer



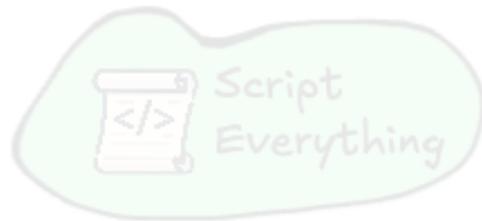
5 Excess Verbosity

Make things scannable



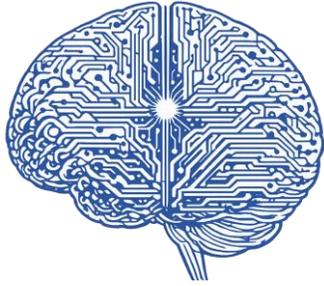
6 Non-Determinism

Minimize AI wherever possible





Knowledge Documents



Possibly
Relevant
Knowledge



Task

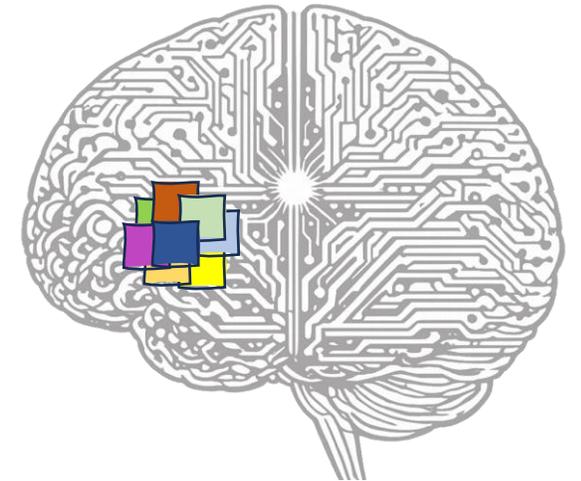


Context Window



Seven sentences about **one thing**

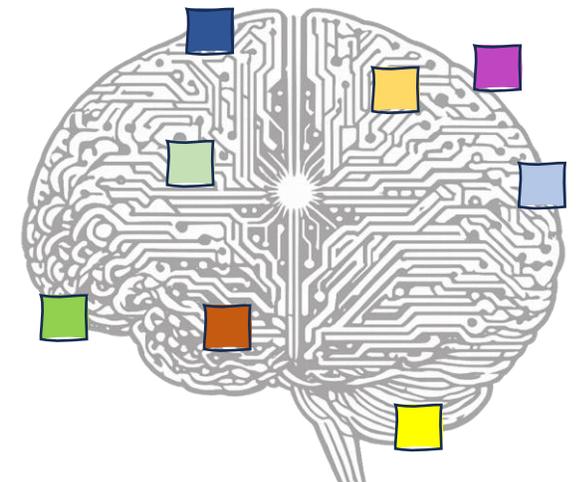
1. A unit test should test one thing at a time
2. A unit test should be small and focused
3. A unit test should run fast
4. A unit test should be deterministic
5. A unit test should not depend on external systems
6. A unit test should clearly express its intent
7. A unit test should fail for only one reason



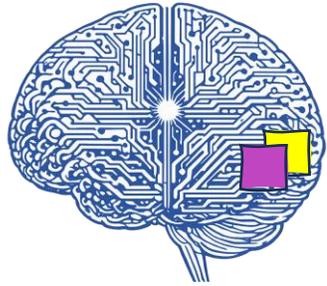
Focused Agent

Seven sentences about **seven different things**

1. Start with a clear purpose: write down the problem you're solving and who it's for
2. Involve the right people early, especially those who will use or maintain the system
3. Break work into small, testable increments that can be completed in days, not months
4. Keep the main branch always releasable through continuous integration
5. Automate builds, tests, and linting so quality checks are not optional
6. Write code that optimizes for readability over cleverness
7. Document decisions (why), not just APIs (what)



Distracted Agent



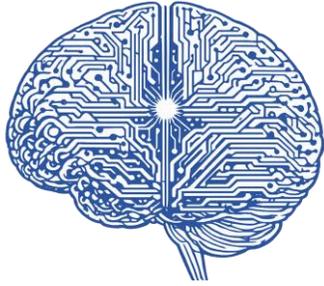
Focused Agent



Dedicated Task



Context Window



Relevant Knowledge



Task



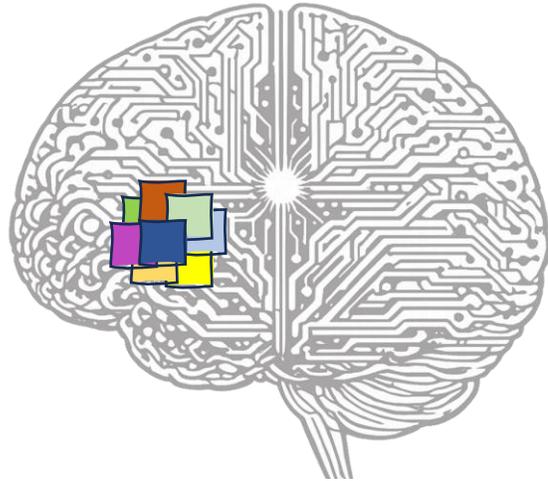
Context Window



Task



Context Window



Focused Agent

History

SKILLS

2 Thought Partnership

AI as active partner

1 Context Management

Build your Knowledge Library



3 Focus

More is not better



4 Managing Complexity

Take small steps, so you can steer



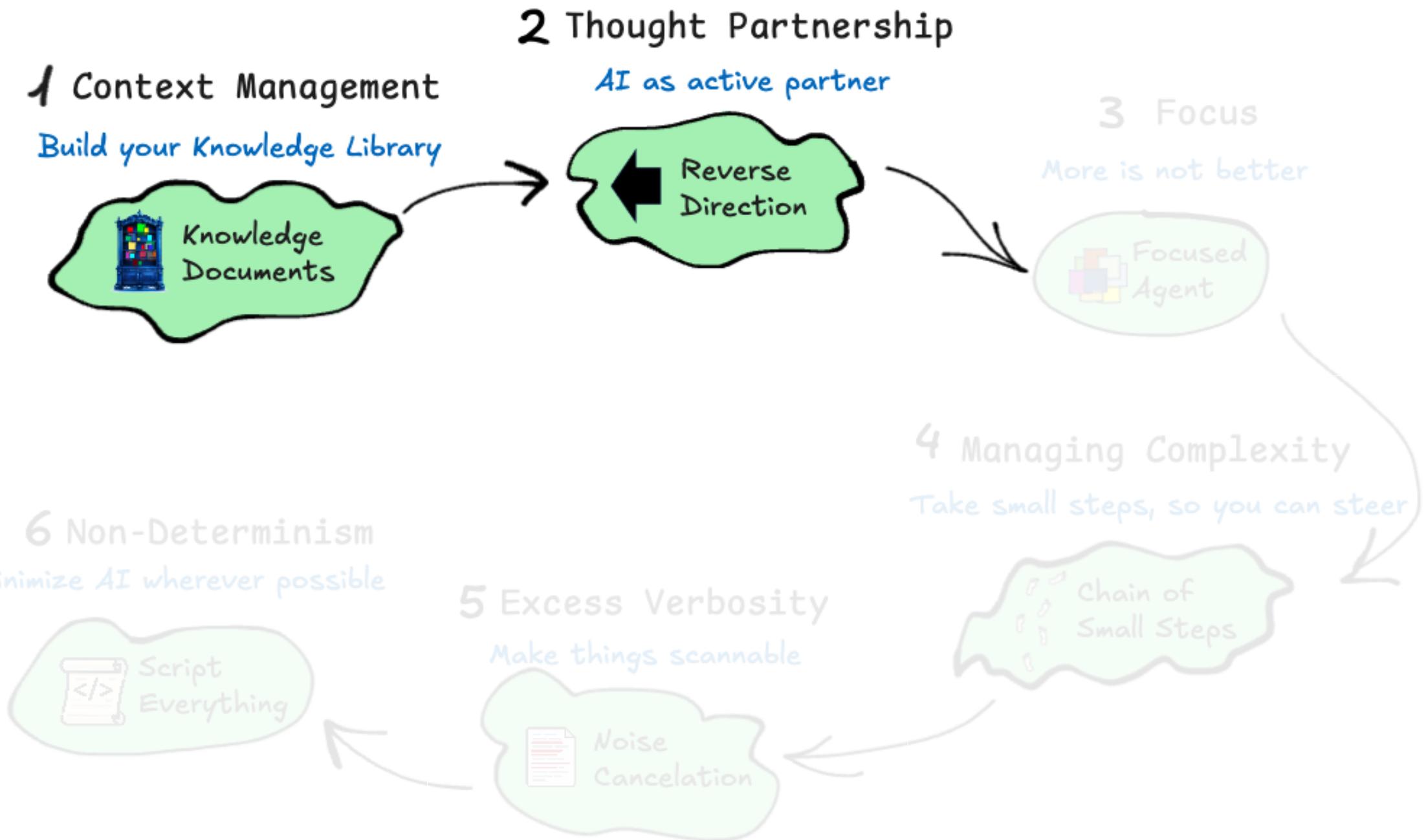
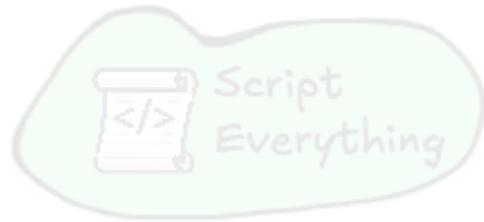
5 Excess Verbosity

Make things scannable

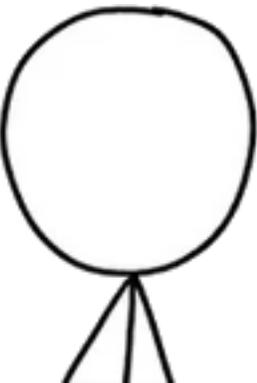


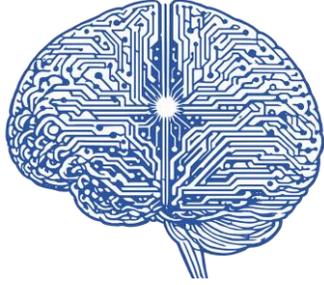
6 Non-Determinism

Minimize AI wherever possible

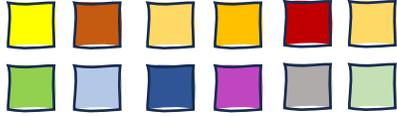


But what if all the knowledge is relevant because the task is really big?





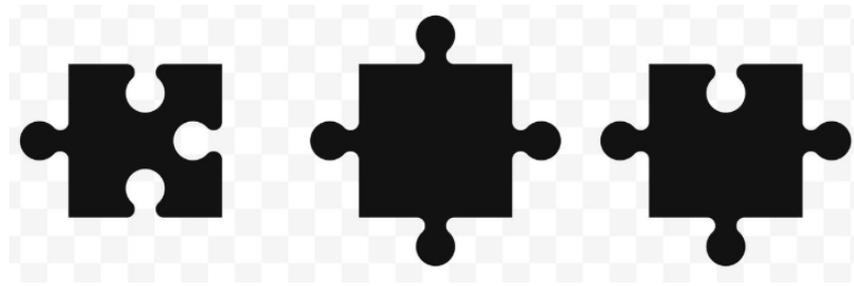
Relevant Knowledge



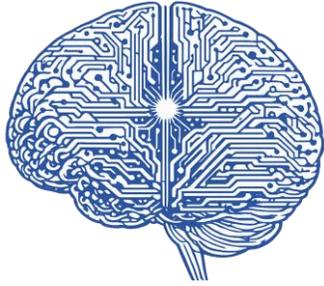
Task



Context Window



Managing Complexity



Relevant Knowledge

Yellow	Brown	Light Orange	Orange	Red	Light Yellow
Green	Light Blue	Dark Blue	Purple	Grey	Light Green

independently

Yellow	Brown
Green	Light Blue

Task 1



Context Window

Light Orange	Orange
Dark Blue	Purple

Task 2



Context Window

Dark Blue	Purple	Grey	Light Green
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Task 3

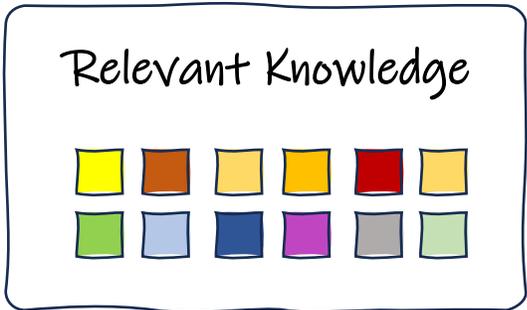


Context Window

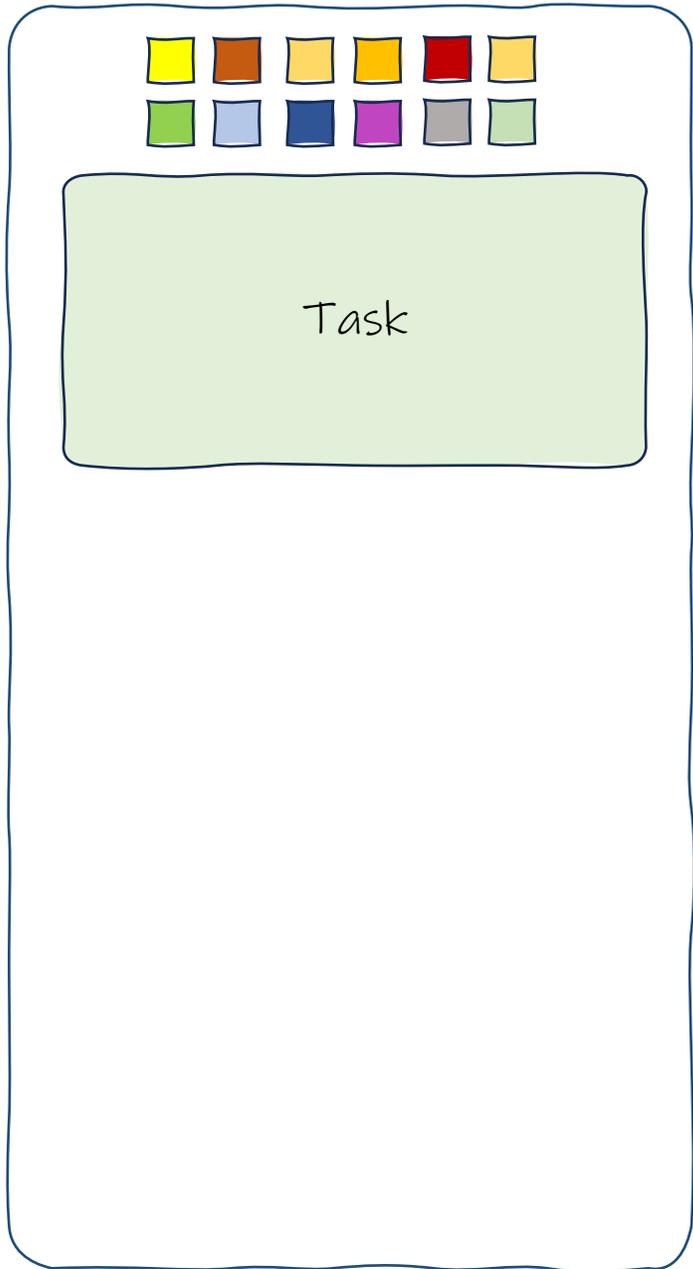
Independent Tasks



Context Window



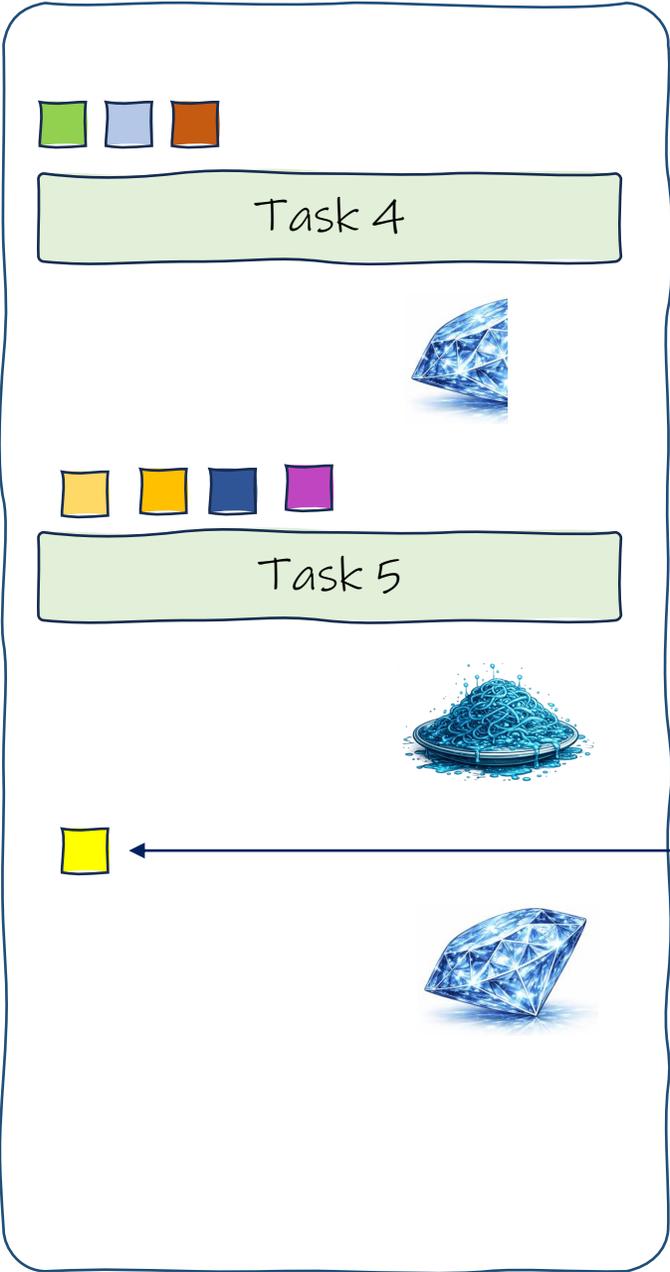
recency bias



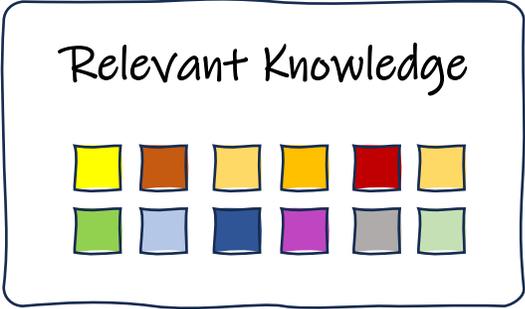
Context Window



Chain of Small Steps

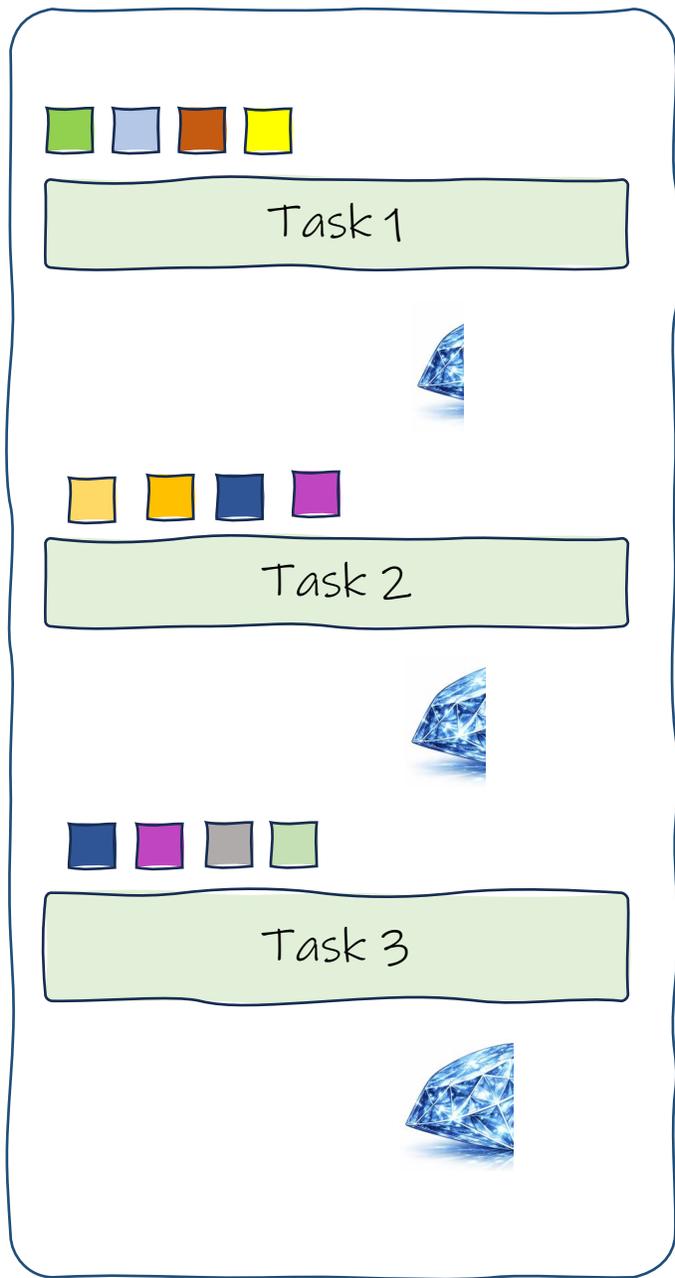


Context Window



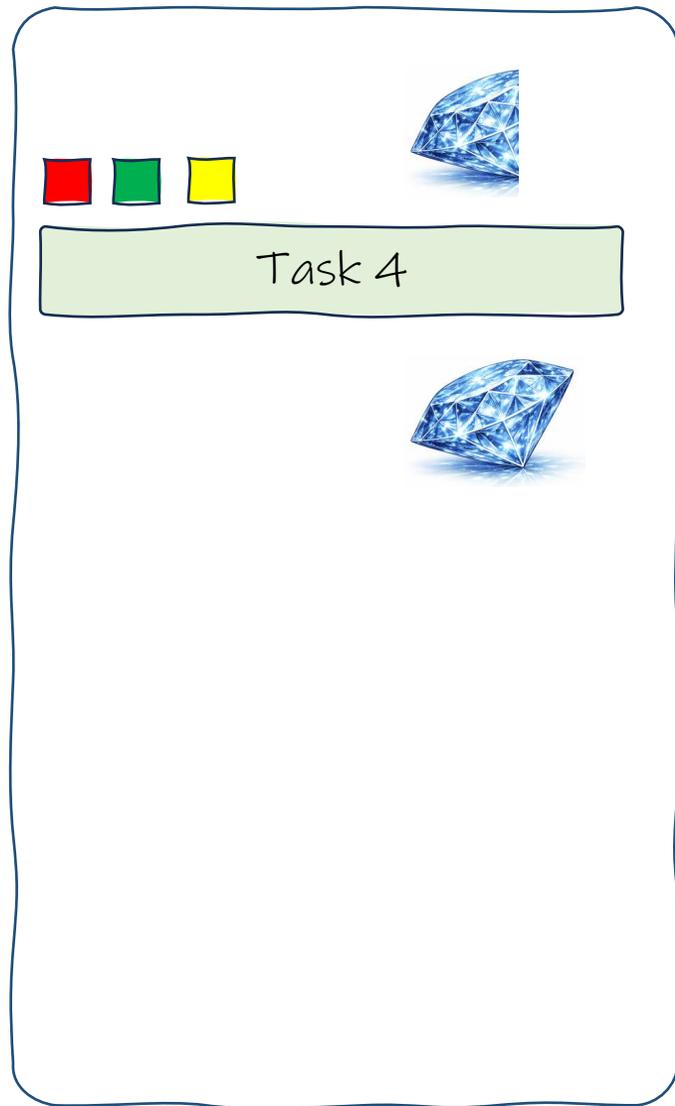


Continuing in a New Context



Context Window

end of context



New Context





Chain of Small Steps

1 Context Management

Build your Knowledge Library



2 Thought Partnership

AI as active partner



3 Focus

More is not better



4 Managing Complexity

Take small steps, so you can steer



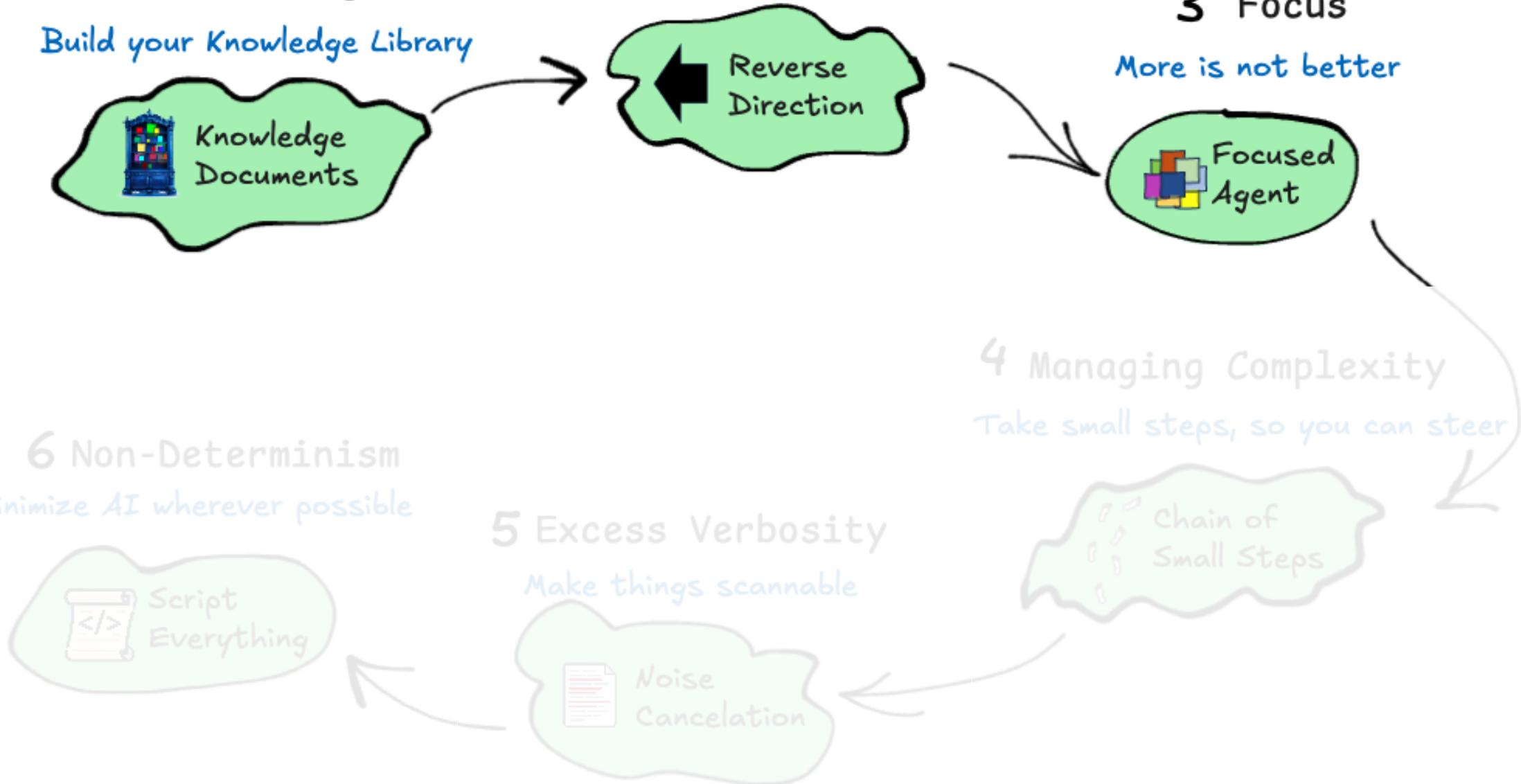
5 Excess Verbosity

Make things scannable

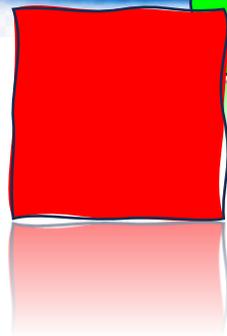
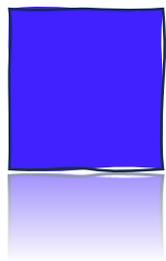


6 Non-Determinism

Minimize AI wherever possible









Bla bla?

Bla blabla bla bla. Bla bla bla,
bla bla bla bla blabla bla.

Blabla? Bla bla bla bla:

1. Bla?
2. Bla bla blabla?
3. Bla bla blablabla?
4. Blablabla bla bla bla?
5. Bla bla?
6. Blabla?
7. Bla bla?
8. Blabla bla bla?
9. Bla bla blabla bla bla. Bla?
10. Bla bla bla?

Bla blabla bla blabla bla!

*Ask me only one question
at a time*

You're absolutely right!
Bla bla blablabla bla bla.
Bla bla?

Context Window



Bla bla?

Bla blabla bla bla... Bla bla
bla, bla bla bla bla blabla bla.
Blabla bla bla bla bla. Bla bla
blabla bla bla bla blabla. Bla
bla bla blabla bla bla.
Blablabla bla bla bla bla bla.
Bla bla blabla bla! Blabla bla
bla bla. Bla bla blabla bla.
Blabla bla bla bla bla. Bla bla
blabla bla bla bla bla bla. Bla
bla bla blabla. Bla blabla bla
blabla bla?

Much more succinct please

Bla bla bla bla, bla bla. Bla
bla blabla? Bla bla?

Context Window

makes the meaning scannable

really helps with doc maintainability

Zoom out:

“Make it **shorter**”

”Make it **more succinct**”

“Describe architecture on the **high level**”

“Give me a **TLDR** of this”



Noise Cancellation

1 Context Management

Build your Knowledge Library



2 Thought Partnership

AI as active partner



3 Focus

More is not better



4 Managing Complexity

Take small steps, so you can steer



5 Excess Verbosity

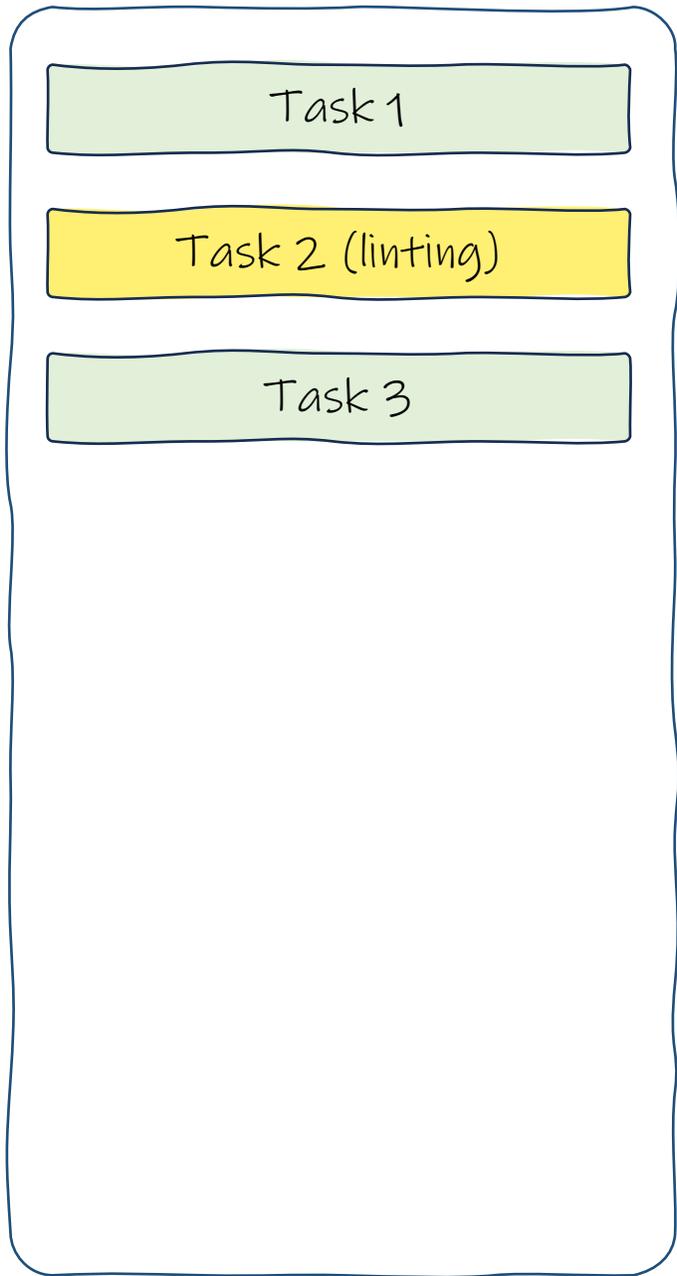
Make things scannable



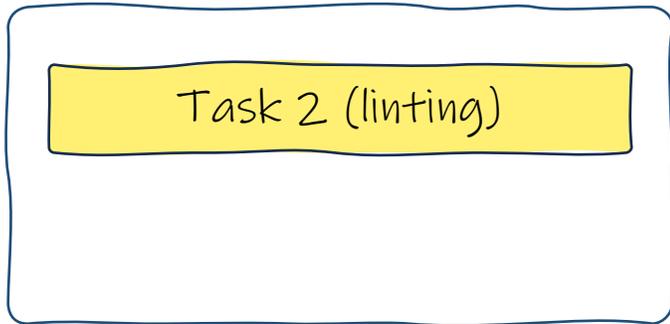
6 Non-Determinism

Minimize AI wherever possible





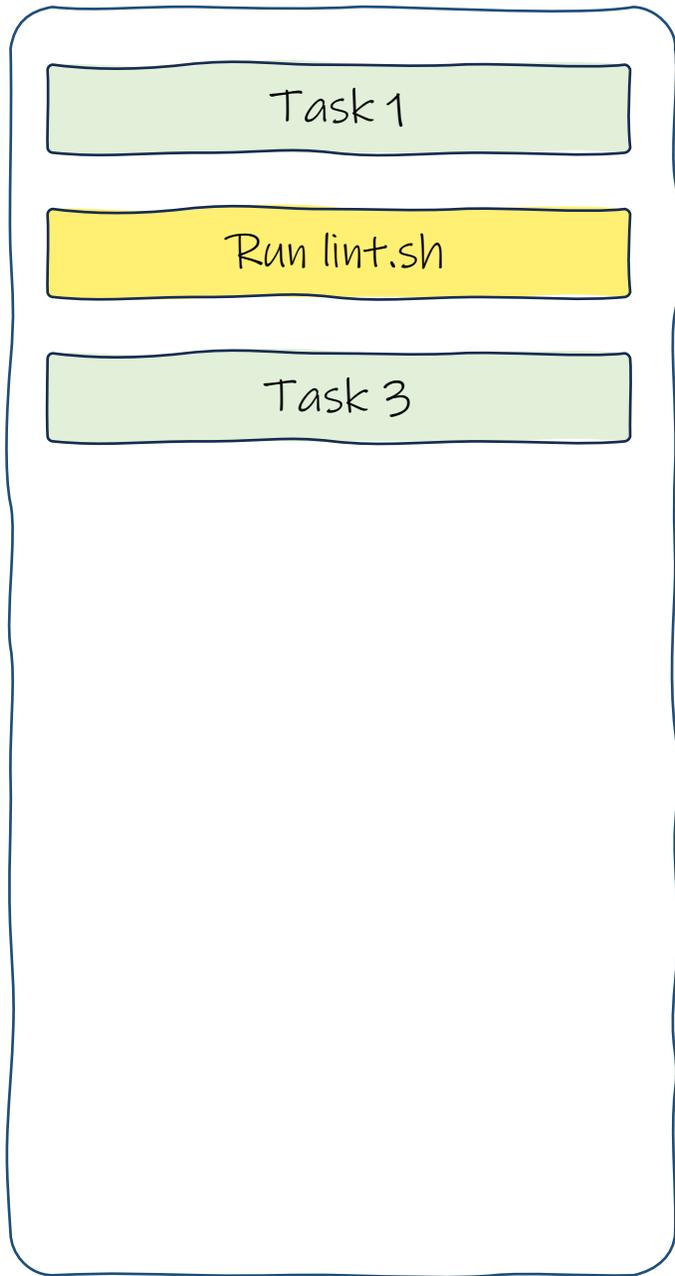
Context Window



Context Window



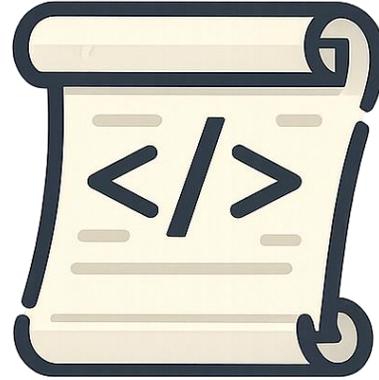
lint.sh



deterministic!

Script Everything Scriptable

Context Window



Script Everything
(Offload Deterministic)

1 Context Management

Build your Knowledge Library



2 Thought Partnership

AI as active partner



3 Focus

More is not better



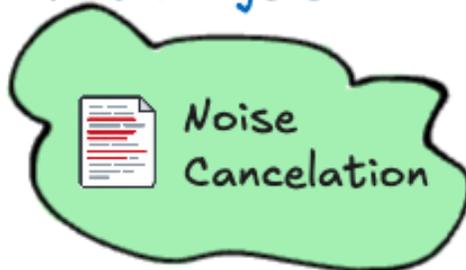
4 Managing Complexity

Take small steps, so you can steer



5 Excess Verbosity

Make things scannable

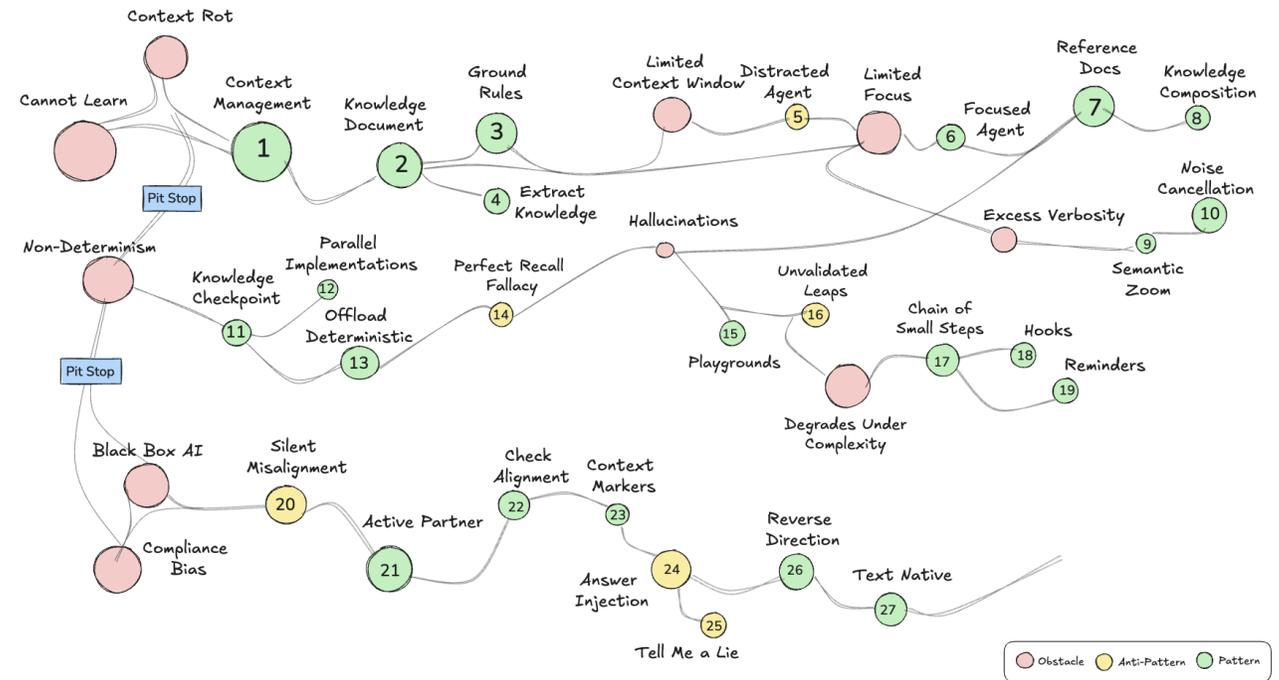


6 Non-Determinism

Minimize AI wherever possible



Resources





Thank you!

