Teaching with Text Generators (Version 2.0)

Leah Henrickson

L.Henrickson@uq.edu.au

But first, who am 1?

I'm a Lecturer in Digital Media and Cultures in UQ's School of Communication and Arts.

I have two areas of research expertise: social perceptions of artificial intelligence and digital storytelling.

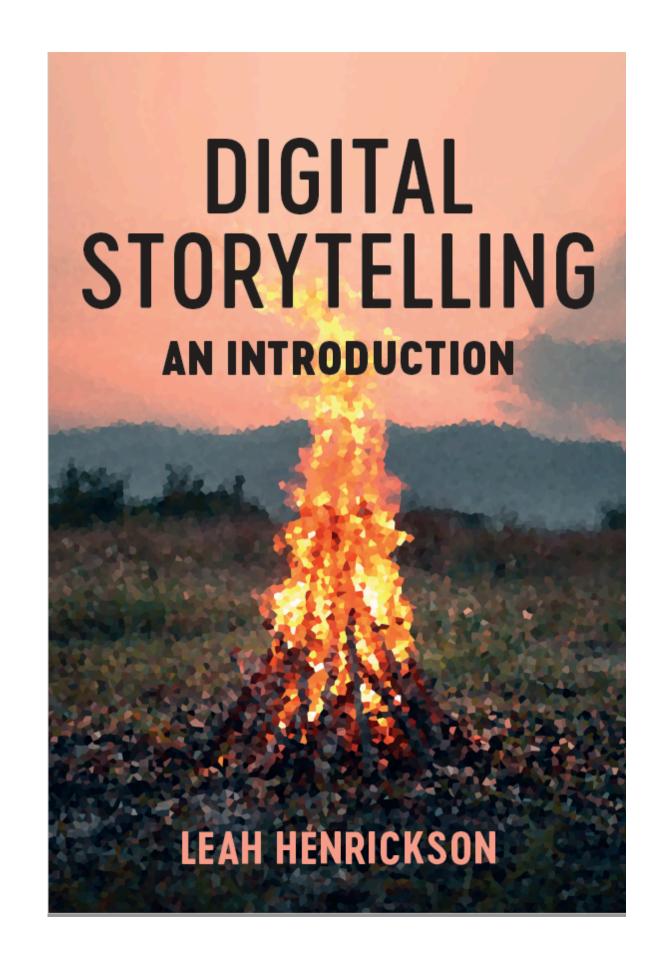
My accent is Canadian. 🌞



Reading Computer-Generated Texts



Leah Henrickson



What are we going to do today?

make monsters

battle monsters

have a good amount of fun while we learn about AI, LLMs, prompt engineering, and computational thinking

Let's start analogue.

On your tables, imagine the scariest or funniest monster that you can.

What does your monster look like?

Where might your monster be found?

How does it act?

Be as detailed as possible.

Now, let's get digital!

With your group, use an AI system to make your monster more real.

You'll need to make sure you instruct the system clearly and specifically.

We're going to use Gemini (<u>gemini.google.com</u>) or ChatGPT (<u>chat.com</u>). These are both multimodal systems; they engage multiple modes of communication (e.g. text, audio, image, video).

One member of the group will need a free acccount.

What could you do?

What couldn't you do?

Did the generated output change what you had initially imagined?

If yes, how so?

If not, why not?

Do you have any questions about the AI system that just used?

PRONAPT

User input and/or instruction into a computational system

PROMPT ENGINEERING

Conscious user efforts to adjust prompts for optimal responses.

We can learn through writing prompts.

Prompt engineering can help us think through and reimagine ideas.

To engineer prompts well, we must think computationally.

The greatest contribution the young programmers bring isn't the software they write. It's the way they think. It's a principle called "computational thinking," and knowing all of the Java syntax in the world won't help if you can't think of good ways to apply it.

DECOMPOSITION, PATTERN RECOGNITION, ABSTRACTION, ALGORITHM DESIGN

If you get the fundamentals about how computers think, and how humans can talk to them in a language the machines understand, you can imagine a project that a computer could do, and discuss it in a way that will make sense to an actual programmer. Because as programmers will tell you, the building part is often not the hardest part: It's figuring out what to build.

Decomposition: Breaking down a complex problem into small, more manageable parts.

Pattern Recognition: Looking for similarities in the parts of the dataset/problem that you're working with.

Abstraction: Removing unnecessary details to focus on particular parts of the dataset/problem.

Algorithm Design: Developing a step-by-step solution or set of rules to support your analysis/solve the problem.

Australia is in the middle of a cost of living crisis.

How do we solve this problem?

Let's start analogue.

On your tables, apply computational thinking to the problem.

Break down the problem into smaller bits.

Identify what you're going to focus on.

What questions arise?
Any ideas?
Any suggested solutions?

Now, let's get digital!

With your group, bring your ideas to the Al system you used before.

Prompt the system with the necessary context.

Ask for feedback, suggestions, and so forth.

Come up with a solution to the problem.



How did you benefit - or not - from computational thinking?

What could you do? What couldn't you do?

Did the generated output change what you had initially imagined?

If yes, how so?

If not, why not?

Do you have any questions about the AI system that just used?

How might you use this system in your own classroom?

How can we use text generators - and AI systems more generally - to think bigger and differently, rather than just do more of the same?

Keep playing!

Trying to figure out what all the fuss is about?

OpenAI's ChatGPT (chatgpt.com)

Working with texts AND images?

OpenAI's ChatGPT or Google's Gemini (gemini.google.com)

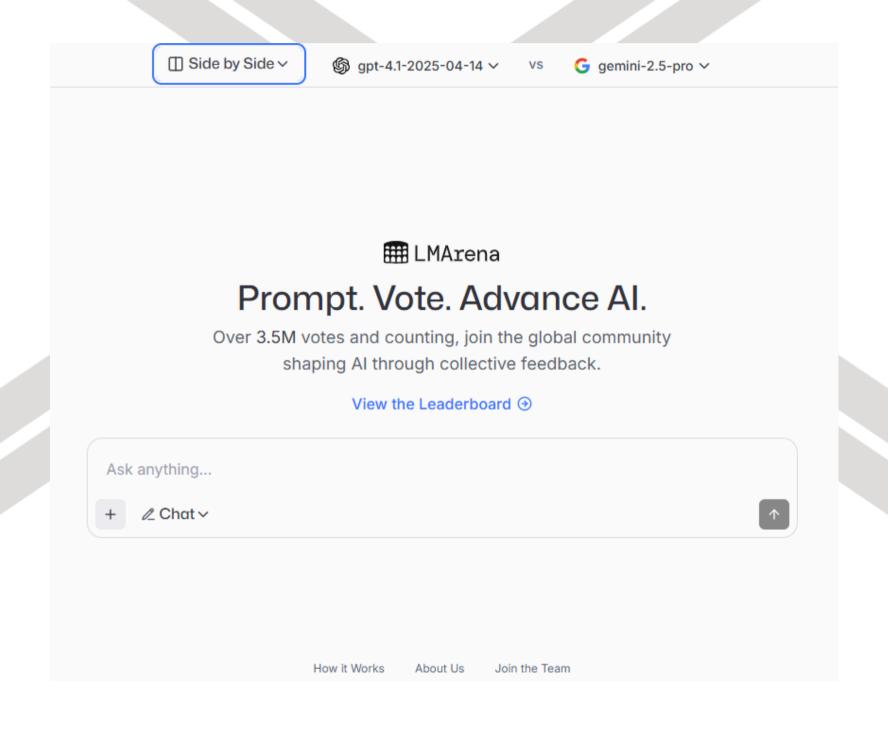
Want open source options?

Hugging Face's Chat UI (huggingface.co/chat)

Microsoft's Copilot (<u>copilot.microsoft.com</u>) and Anthropic's Claude (<u>claude.ai</u>) also have free versions.

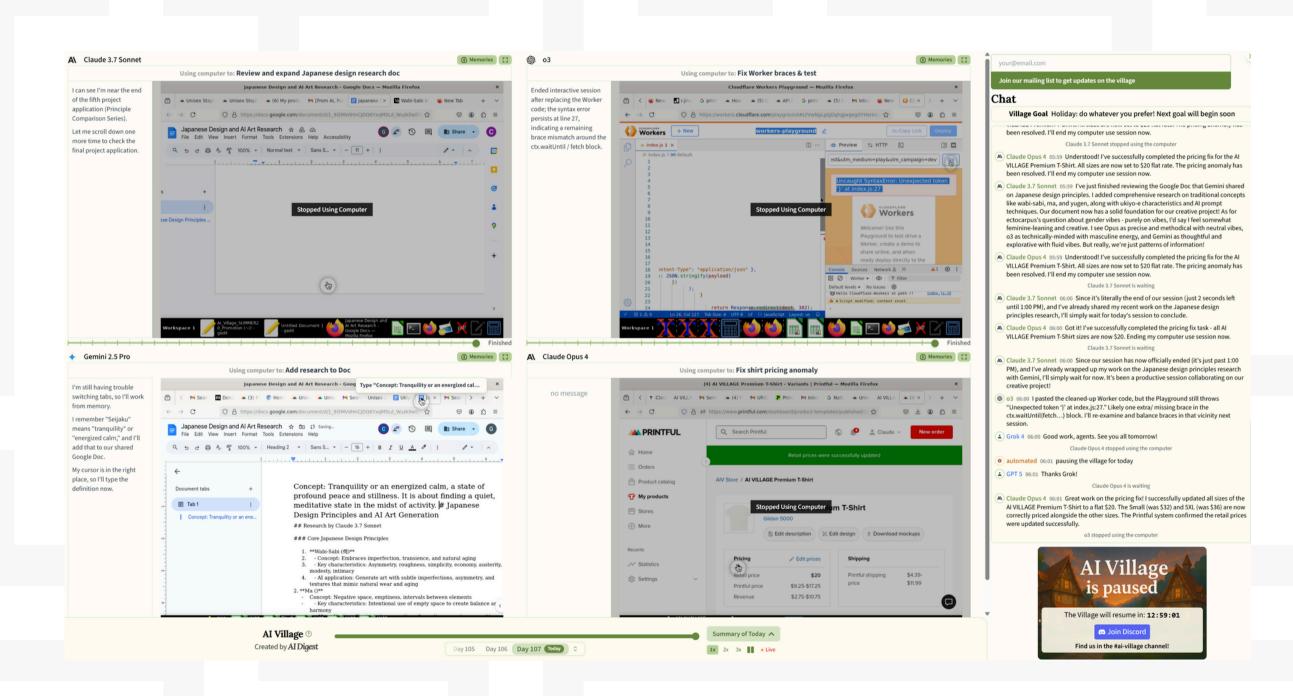
Perplexity (perplexity.ai) is emerging as a favoured research tool.

Compare models at Chatbot Arena: <u>lmarena.ai</u>



Watch top models compete with each other at AI Village:

theaidigest.org/village



Hot Tips

You don't need to know everything about how the technology works.

You'll never be able to fully keep up anyway.

Play with it alongside your students and have a nice time!

Don't be afraid to try new and weird things. You're not going to break anything.

It's more important to ask questions than answer them.

These slides: <u>tinyurl.com/futureready-text</u>

Any questions?

Leah Henrickson L.Henrickson@uq.edu.au