

Writing Poetry Using Artificial Intelligence

David Sinclair

23 Aug 2023

There has been a lot of stuff about AI in the news recently. Huge amounts of money and effort have been put into developing commercially useful AI systems, resulting in systems that can apparently understand and speak natural languages, write news reports, create new TV scripts and even write novels. Speech synthesis and recognition are commonplace on our phones and laptops and image recognition apparently allows computers to understand the world about them.

Of course, there is a lot of hype in that. But AI does appear to be able to do a great number of remarkable things. The question is can it write decent poetry?

To investigate this, I took a sonnet that I wrote a while ago and explored whether the free version of ChatGPT (version 3.5), a highly advanced AI system, could produce something similar.

Here is my poem:

The Mismaze

While fields submit to winter's white campaign,
clouds kiss and bruise the hills with grey,
the wind pins the sky to earth's window frame
and I flee the town to climb my favourite way.
Atop the hill the hard and frosty sward
is cut by dark and winding lines. I ask what strange,
mad maze is this, with only but a single path?
No answer heard, just winter's wild refrain.
You could not know whose feet would trace your craft.
But now my steps between the frigid turf
decode your labyrinthine cryptograph
and bring me to the centre of your work.
And though you're gone, I still remain, a mourner
To your death below, in cold and tender water.

The background to this poem is:

To the east of Winchester, on the top of St Catherine's Hill there is an area of narrow paths, exposing the chalk under the downland turf. This is the Winchester Mismaze, one of eight historic turf mazes still remaining in England. This is not a maze in the modern sense but a labyrinth, cut into the chalk, with no junctions or crossings. It is laid out in nine nested squares, similar to those used for the traditional game of Nine Men's Morris. Although mediaeval in design, its origins are obscure. A local legend suggests it was carved one summer in the 17th century by a boy from Winchester College who had been banished to the hill for bad behaviour. To occupy his time, he recalled a lesson on classical maze design and carried out the lonely task of laying out and cutting the maze. The story ends with the boy sadly drowning in the river below on the last day of the

holidays. There is a similar maze at nearby Braemore House - perhaps the boy had seen this and used it as part of his inspiration.

It's a nice story, but there may not be any truth in it. For the purposes of the sentiment in the poem, it does not really matter if the story is true or not.

To get ChatGPT to generate a similar poem, I first had to give ChatGPT the same story. Then I gave ChatGPT a fairly general instruction to write a sonnet based on this subject and captured its response. The transcript is listed below.

DA

To the east of Winchester, on the top of St Catherine's Hill there is an area of narrow paths, exposing the chalk under the downland turf. This is the Winchester Mizmaze, one of eight historic turf mazes still remaining in England. This is not a maze in the modern sense but a labyrinth, cut into the chalk, with no junctions or crossings. It is laid out in nine nested squares, similar to those used for the traditional game of Nine Men's Morris. Although mediaeval in design, its origins are obscure. A local legend suggests it was carved one summer in the 17th century by a boy from Winchester College who had been banished to the hill for bad behaviour. To occupy his time, he recalled a lesson on classical maze design and carried out the lonely task of laying out and cutting the maze. The story ends with the boy sadly drowning in the river below on the last day of the holidays. There is a similar maze at nearby Braemore House - perhaps the boy had seen this and used it as part of his inspiration. Write a sonnet about the boy who carved the mismaze.

ChatGPT

Upon St Catherine's Hill, a tale resides,
Of youthful soul, in solitude confined,
A Winchester lad, banished to the heights,
With labyrinthine thoughts within his mind.

Mischievous deeds had led him to this place,
A punishment, a hill his lone abode,
Yet from his heart, creative dreams did trace,
A maze of chalk, a story to be told.

With nimble hands and steadfast heart, he toiled,
Recalling lessons learned in days of yore,
Each line and curve upon the hill unspoiled,
A labyrinth of beauty to explore.

But fate did cast its sorrowful decree,
As river's grasp took him, forever free.

In seventeen, a century turned gray,
Upon that hill, a maze of myst'ry lay,
A Winchester lad, his fate unjust,
In solitude, his heart and hands did thrust.

With nimble fingers, chalk on turf he drew,
A labyrinthine path, both old and true,
No crossings, junctions, just winding ways,
A masterpiece to fill his lonely days.

Inspired by legends, Braemore's design,
Perhaps the spark that lit his path's design,
Yet as his work neared its intricate end,
The river's current called, a somber blend.

Last day of holidays, as sun kissed sky,
He met the waters, bade the world goodbye,
But in the maze, his spirit's essence stays,
A labyrinth of dreams, forever blaze.

Oh, Winchester lad, your tale we weave,
A sonnet to the boy who dared to cleave,
A labyrinth of art on St Catherine's Hill,
In mists of time, your spirit lingers still.

Well, that is perhaps a bit disappointing. The rhyme and metre are pretty solid, but instead of a single sonnet, ChatGPT delivered a fourteen-line sonnet and another 20 lines of couplets. The general tone of the language seems a bit simplistic. For me the rather archaic phrasing, e.g. 'solitude confined' and 'his lone abode' seem clunky – and seems a rather naïve way of invoke the historical context of the story. The second section of the poem mentions Braemore, which is a bit of a distraction and not needed. The image of “labyrinthine thoughts” is a good one, given the subject of the poem, and the use of the ‘mischievous deeds’ certainly is giving an accurate description of how the boy got on the hill. So not a bad attempt, but something I would be far from happy with if I had written it myself.

Maybe giving ChaGPT a bit more precise direction would help:

DA

Write a Shakespearean sonnet.

ChatGPT

Upon St Catherine's Hill, a tale unfolds,
A Winchester lad, in solitude astray,
By misbehavior's hand, his fate was told,
To carve a maze where chalk and turf held sway.

No crossings, just a labyrinthine grace,
In nested squares, a puzzle to explore,
Inspired by ancient times, he did embrace,
A lonely task that history would store.

Beneath the summer sun, his hands did toil,
His heart and mind poured into every line,
A masterpiece emerging from the soil,
A maze that in its beauty seemed divine.

Yet as the legend goes, a river's call,
Took him away, but left his maze for all.

That resulted in a single sonnet, so some improvement. But the style/tone is still rather ponderous. The next thing to try is tell ChatGPT to write in a certain style. ChatGPT 'knows' about many famous poets, so let us see if can emulate a 20th century favourite:

DA

Write a sonnet in the style of Seamus Heaney

ChatGPT

On St Catherine's Hill, a tale emerges,
A Winchester youth, cast in solitude,
By wayward acts, his destiny diverges,
To craft a maze where chalky paths conclude.

No modern puzzle, but a winding trace,
In nested squares, a mystic dance unveiled,
Inspired by ancient paths, he chose to embrace,
A lonely task, by history's hand detailed.

Beneath the summer sun, his hands were moved,
His spirit etched in every curving line,
A masterpiece of turf and chalk behooved,
A homage to the past, a work divine.

And as the legend whispers, fate did call,
He joined the river's flow, but left his thrall.

Hmm, that is not very successful. It does not sound like Seamus Heaney at all, at least to my ear. It seems that although ChatGPT does know (or can at least regurgitate) the characteristics of a writer when asked to list those characteristics explicitly, it does not use those characteristics directly. Examining the literature on writing prose with ChatGPT, it seems that the better technique is to give ChatGPT specific instructions on style. So, let's get ChatGPT to tell us the stylistic characteristics of a particularly gloomy poet as this is a gloomy subject and then give ChatGPT the appropriate guidance. I'll pick Philip Larkin.

First of all, how is Larkin's poetry characterised?

Summarise the characteristics of Philip Larkin's poetry.

ChatGPT

Philip Larkin's poetry is characterized by several key elements:

1. **Everyday Life and Ordinary Themes:** Larkin often focused on mundane aspects of everyday life, capturing the feelings, thoughts, and experiences of ordinary people. His poetry explores themes such as loneliness, love, aging, death, and the passage of time.
2. **Clarity and Simplicity:** Larkin's language is clear and accessible. He avoids elaborate vocabulary and intricate metaphors, aiming for simplicity and directness in his expression.
3. **Realism and Honesty:** Larkin is known for his honest portrayal of life's darker aspects. He doesn't shy away from addressing difficult emotions, existential questions, and the disillusionment that can come with the passage of time.
4. **Personal Reflection:** Much of Larkin's poetry is introspective and reflective. He often speaks from a personal standpoint, sharing his own observations, thoughts, and feelings.
5. **Pessimism and Irony:** Larkin's poetry often carries a tone of pessimism and cynicism. He reflects on the limitations and disappointments of human existence, using irony to comment on life's complexities.
6. **Imagery of Nature and Urban Landscape:** Larkin frequently employs imagery from both nature and urban settings. He contrasts the changing seasons and natural cycles with the urban environment to explore themes of transience and the clash between human and natural worlds.
7. **Use of Form and Structure:** Larkin's poems are often characterized by traditional forms such as quatrains and rhyme schemes. He values the structure of poetry and uses it to enhance the impact of his themes and emotions.
8. **Social Commentary:** Larkin's poetry occasionally offers social commentary, touching on topics like societal norms, class distinctions, and the impact of modernization on human relationships.
9. **Isolation and Alienation:** Many of Larkin's poems delve into feelings of isolation and alienation. He captures the sense of detachment that can arise in modern society and explores the difficulty of forming meaningful connections.
10. **Influence of Music:** Larkin was influenced by music, particularly jazz. This influence can be seen in the rhythms and tones of his poetry.

Overall, Philip Larkin's poetry is celebrated for its unflinching honesty, evocative language, and exploration of the human condition. He presents a candid and often somber view of life, resonating with readers through his relatable themes and emotions.

Okay, now we know about Larkin that we can use this information to tell ChatGPT how we want the poem written:

Using the following elements, write a sonnet about the boy who made the Mismaze. Use unflinchingly honest, evocative language in a sombre tone that includes the following elements: Everyday Life and Ordinary Themes: focus on mundane aspects of everyday life, capturing the feelings, thoughts, and experiences of ordinary people. His poetry explores themes such as loneliness, love, aging, death, and the passage of time. Clarity and Simplicity: use language is clear and accessible. He avoids elaborate vocabulary and intricate metaphors, aiming for simplicity and directness in his expression. Realism and Honesty: given an honest portrayal of life's darker aspects. Do not shy away from addressing difficult emotions, existential questions, and the disillusionment that can come with the passage of time. Personal Reflection: Be introspective and reflective. Speak from a personal standpoint, sharing his own observations, thoughts, and feelings. Pessimism and Irony: Carry a tone of pessimism and cynicism and reflect on the limitations and disappointments of human existence, using irony to comment on life's complexities. Imagery of Nature and Urban Landscape: Employs imagery from both nature and urban settings. Contrasts the changing seasons and natural cycles with the urban environment to explore themes of transience and the clash between human and natural worlds. Isolation and Alienation: Many of Larkin's poems delve into feelings of isolation and alienation. He captures the sense of detachment that can arise in modern society and explores the difficulty of forming meaningful connections.

ChatGPT

Amid the mundane rhythms of each day,
A boy stood on that hill, unseen, unknown,
His hands traced paths on chalk, a somber play,
A labyrinth of solitude he'd sown.

No need for fancied words or artful prose,
His thoughts found voice in language simple, stark,
No flourish, just reflections that impose,
The weight of life's unyielding, cold remark.

With every stroke, he carved his inner truth,
A mirror to the darkness that's concealed,
Addressed the questions haunting his own youth,
The cynic's lens through which all's soon revealed.

He wove the city's coldness in his maze,
A clash of worlds, where nature's beauty sways.

Isolated on that hilltop's crest,
He etched the solitude that life imparts,
A witness to the isolation's test,
And love's frail ties that time so often parts.

His hands embraced the chalk, a simple tool,
As nature's cycle danced in fields below,
Yet urban realm cast shadows, cold and cruel,
A discord in the song that life bestows.

The seasons turned, a metaphor for all,
The boy and maze, both trapped in time's cruel thrall.

In loneliness he found his bitter muse,
A cynic's heart that whispered in the breeze,
A somber tone, the irony he'd choose,
To paint the canvas of life's stark unease.

And so he carved a tale of youth and woe,
The boy who, lost in maze, himself did find,
Reflections in the paths that he'd bestow,
A commentary on the human mind.

Isolation's arms held him in embrace,
As life's complexities he'd interlace.

Now we have a gloomier tone, and perhaps a more modern feel. But it certainly does not sound like authentic Larkin, it perhaps has too regular a metre and too straightforward a choice of rhymes. And it certainly does not have the complexity and depth of treatment that Larkin would give this suitable morbid subject. This can be seen by looking at an authentic example of Larkin, which discusses the meaning of life and death:

Aubade¹

BY [PHILIP LARKIN](#)

I work all day, and get half-drunk at night.
Waking at four to soundless dark, I stare.
In time the curtain-edges will grow light.
Till then I see what's really always there:
Unresting death, a whole day nearer now,
Making all thought impossible but how
And where and when I shall myself die.
Arid interrogation: yet the dread
Of dying, and being dead,
Flashes afresh to hold and horrify.

... stanzas omitted

And so it stays just on the edge of vision,
A small unfocused blur, a standing chill
That slows each impulse down to indecision.
Most things may never happen: this one will,
And realisation of it rages out

¹ The full text of the poem is available from the Poetry Foundation website:
<https://www.poetryfoundation.org/poems/48422/aubade-56d229a6e2f07>

In furnace-fear when we are caught without
People or drink. Courage is no good:
It means not scaring others. Being brave
Lets no one off the grave.
Death is no different whined at than withstood.

Slowly light strengthens, and the room takes shape.
It stands plain as a wardrobe, what we know,
Have always known, know that we can't escape,
Yet can't accept. One side will have to go.
Meanwhile telephones crouch, getting ready to ring
In locked-up offices, and all the uncaring
Intricate rented world begins to rouse.
The sky is white as clay, with no sun.
Work has to be done.
Postmen like doctors go from house to house.

Lines like “Death is no different whined at than withstood” have a genuine emotional bite, something that I don't perceive in the ChatGPT output. Larkin use of alliteration (‘whined ... withstood’) to heighten the impact of certain phrases is also something that ChatGPT does not attempt.

As a last step, let's try and get ChatGPT to stick to the proper sonnet form:

DA

Rewrite that as a 14 line sonnet maintaining the poetic tone.

ChatGPT

Amid mundane rhythms, boy on hill's crest,
His hands traced chalk, a labyrinthine plight,
No need for artful prose, just truth confessed,
In language simple, stark, his thoughts took flight.

With strokes he carved reflections dark and true,
Addressed life's questions, cynic's tone in tow,
City's chill clashed with nature's vibrant hue,
Isolation's embrace, a bitter blow.

The seasons turned, their dance a wistful tale,
Both boy and maze caught in time's fleeting snare,
In solitude's deep well, he set his sail,
A somber voice, life's complexity laid bare.

Thus, through his maze, his introspection flowed,
In isolation's grip, his truths bestowed.

And now let's try and make it a bit sadder:

DA

Rewrite that as a 14 line sonnet but focus on the pathos of the boy's death.

ChatGPT

Amid mundane rhythms, boy on hill's height,
His hands traced chalk, a labyrinthine tale,
No need for flowery words, he faced the night,
In language stark, his sorrow did prevail.

With every line, he carved his inner pain,
A mirror to the darkness deep within,
Addressed life's questions, but all in vain,
For in his heart, the weight was hard to thin.

The seasons turned, a metaphor so cold,
Both boy and maze caught in time's cruel wane,
In isolation's grip, his spirit's hold,
A somber voice, in solitude's domain.

And as the legend tells, he found his rest,
In river's arms, a sorrow unconfessed.

Again, I feel disappointed with ChatGPT's effort. All of these samples were generated in the same ChatGPT session, so the context in which ChatGPT should accumulate throughout the session. The instructions to write in the style of Larkin should therefore apply to these last examples – but any Larkinisms seem, at least to me, to have dissipated.

So, what can we conclude?

1. ChatGPT certainly can generate poetry that addresses a specific subject
2. It is good at producing strict rhyme and metre, but its choice of words used for each rhyme seems rather mechanistic – and does not replicate the subtle meanings that human poets achieve by careful word selection or half rhymes. It does not choose to break up the metre either, in the creative way that human poets often do.
3. It can describe the characteristics of a given poet, but it is not good at producing poetry that is strongly matched to the style of that poet.
4. The poetry produced lacks great emotional depth or cohesion.

Of course, I've only spent a couple of hours experimenting, so there may well be other approaches and techniques that would yield better results. I'm not really interested in investigating further though, as the primary thing missing when writing poetry with ChatGPT is any sense of joy or excitement or dare I say it wonder on my part. ChatGPT is just a mechanistic tool, fascinating for its capabilities, but not really much fun. I can't see it in its present form winning any poetry competitions or even giving the readers of its poetry the same sort of pleasure that they might get from reading well written human generated poetry.

Coda – how does ChatGPT work?

ChatGPT² is perhaps the best-known example of an Artificial Intelligence system that uses a Large Language Model (LLM). An LLM is essentially a system that is trained on a huge amount of data so that it has a deep knowledge of the statistical nature of language patterns and the structure of the texts that we humans use to communicate. LLMs use neural networks to analyse an existing text and to predict what further text is likely to follow. Large quantities of text were scanned to create a large language model (LLM) that is essentially a database of the patterns and relationships between different words in the way that humans communicate, in a subject-specific way. When given a question, instruction or statement the model can then predict likely text responses. The model is thus generating a transformed version of the input text based on pre-trained data – and hence it is called ChatGPT - the GPT standing for Generative Pre-trained Transformer. Such systems do not understand language or poetry in a human sense, but they can produce output that is, at least on the surface, remarkably similar to the natural language response that a human might give in similar circumstances.

Further reading

Brown S. (2021) “Machine Learning Explained”, *Ideas Made to Matter: Artificial Intelligence*, MIT Sloan, Massachusetts, USA Available at <https://mitsloan.mit.edu/ideas-made-to-matter/machine-learning-explained>.

Germain D., (2023) “ChatGPT Fiction — A Detailed Demo”, *Medium*, Available <https://medium.com/@dave.germain.79/chatgpt-fiction-a-detailed-demo-c870221282e4#:~:text=Here's%20an%20example%20of%20a,could%20use%20for%20prose%20writing%3A&text=In%20chat%20%231%2C%20use%20input,Structure%20output%20and%20Character%20Descriptions.&text=In%20chat%20%232%2C%20use%20the,to%20create%20a%20Dialog%20output.&text=In%20chat%20%233%2C%20use%20the,to%20create%20a%20Prose%20output>.

Germain D., (2023) “7 Tips for Writing Fiction with ChatGPT”, *Medium*, USA available at: <https://medium.com/@dave.germain.79/7-tips-for-writing-fiction-with-chatgpt-6d0e686879a8> accessed on 21 Aug 2023.

McKinsey (2023) “What is Generative AI”, *McKinsey and Co web site*, McKinsey and Co, USA. Available at <https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-generative-ai>, Accessed 28 Jun 2023.

Neelakandan L., (2023) “What is a large language model and how does it work?”, *Fast Company website*, Fast Company, USA. Available at <https://www.fastcompany.com/90884581/what-is-a-large-language-model>.

² OpenAI released an Optimizing Language Model for Dialogue name ChatGPT on November 30, 2022. See: <https://chatgpt.pro/>

OpenAI (2023) “Introducing ChatGPT”, OpenAI website, Available at: <https://openai.com/blog/chatgpt/>

Ouyang L, Wu J., Jiang X., Almeida D., Wainwright C. L, Mishkin P., Zhang C., Agarwal S., Slama K., Ray A., Schulman J., Hilton J., Kelton F., Miller L., Simens M., Askeel A., Welinder P, Christiano P., Leike J., Lowe R., (2023) “Training language models to follow instructions with human feedback” *OpenAI* Available at: <https://arxiv.org/pdf/2203.02155.pdf>

Oracle (2023) “What is Deep Learning”, *Oracle Cloud Infrastructure* Available at <https://www.oracle.com/artificial-intelligence/machine-learning/what-is-deep-learning/>.

Pallagy P., (2023) “ChatGPT is awesome. But here’s a failure mode I discovered. LOL.”, Medium, USA, Available at: <https://medium.com/@paul.k.pallaghy/chatgpt-is-awesome-but-dont-trust-it-on-quotes-lol-5f0729390aaf>.

Ramponi M., (2022) “How does ChatGPT actually work”, *Assembly AI* Available at: <https://www.assemblyai.com/blog/how-chatgpt-actually-works/>

Ruby M., (2023) How ChatGPT Works: The Model Behind The Bot, *Towards Data Science*, 30 Jan 2023, [Medium](https://medium.com) · Medium, 548 Market St, PMB 42061, San Francisco, CA 94104, Available at: <https://towardsdatascience.com/how-chatgpt-works-the-models-behind-the-bot-1ce5fca9628>.

Shardlow, M. (2023), “Can a language model be conscious?”, *Articles, opinion and research, BCS Website*, British Computer Society Available at: <https://www.bcs.org/articles-opinion-and-research/can-a-language-model-be-conscious>.