

## Sharp edges led us here

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### Abstract

This work explores the intersections of digital technology and creative poetic expression by integrating binary code as its artistic medium. Inspired by the duality embedded in binary constructs, the authors interrogate how unseen frameworks unify ideologies while perpetuating the damaging effects of singularity. Drawing on Gottfried Leibniz's foundational binary systems, this piece metaphorically examines the pervasive role of binary operations in modern society. The poem's binary translation integrates code writing using Python, as a part of combined efforts to make visible the boundaries that often prevent collaboration between technological and social disciplines. By playing with these structures, the authors advocate for a shift away from binary constructs toward embracing complexity, offering a transformative lens in hopes for the reconsidering of the systems that influence human lived experiences.

### Citation Link

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```
`01000011`01100001`01101110 | `01111001`01101111`01110101 | `01110011`01100101`01100101 |  
`01101101`01100101`00111111 Can you see me?  
`01010100`01101000`01110010`01101111`01110101`01100111`01101000 |  
`01110100`01101000`01100101 | `01101100`01101111`01110110`01101001`01101110`01100111 |  
`01110011`01100101`01100101`01101001`01101110`01100111 |  
`01100101`01111001`01100101`01110011 through the loving seeing eyes  
`01010100`01101000`01100001`01110100 |  
`01110100`01110010`01100001`01110110`01100101`01101100 that travel  
`01000010`01100101`01110100`01110111`01100101`01100101`01101110 |  
`01110100`01101000`01100101 | `01101100`01101001`01101110`01100101`01110011 between the  
lines  
`01001100`01100101`01100001`01101110`01101001`01101110`01100111 |  
`01110100`01101111`01110111`01100001`01110010`01100100`01110011 |
```

`01110100`01101000`01100101 | `01110011`01101000`01100001`01110010`01110000 |  
 `01100101`01100100`01100111`01100101`01110011 **leaning towards the sharp edges**  
 `01010100`01101000`01100001`01110100 | `01100011`01100001`01101110 |  
 `01100011`01110101`01110100 | `01100100`01100101`01100101`01110000 **that can cut deep**  
 `01000010`01100101`01101110`01100101`01100001`01110100`01101000 |  
 `01110100`01101000`01100101 |  
 `01110011`01101001`01101110`01100111`01110101`01101100`01100001`01110010 |  
 `01110011`01101011`01111100 **beneath the singular sky**  
 `01000011`01100001`01101110 | `01111001`01101111`01110101 | `01110011`01100101`01100101 |  
 `01101101`01100101`00111111 **Can you see me?**  
 `01010100`01101000`01110010`01101111`01110101`01100111`01101000 |  
 `01101000`01110101`01101101`01100001`01101110`01101001`01110100`01111001 **Through**  
**humanity**  
 `01001101`01100001`01110100`01110100`01100101`01110010`01110011 |  
 `01110100`01101000`01100001`01110100 | `01101100`01101001`01110110`01100101 |  
 `01100001`01101110`01100100 | `01100100`01101001`01100101 **matters that live and die**  
 `01010010`01100101`01110011`01101001`01110011`01110100`01101001`01101110`01100111 |  
 `01110100`01101000`01100101 |  
 `01100100`01100101`01101101`01100001`01101110`01100100`01110011 **resisting the demands**  
 `01000001`01101110`01100100 |  
 `01100100`01101001`01110011`01101101`01101001`01110011`01110011`01100001`01101100 |  
 `01101111`01100110 | `01100001`01101110`01111001 |  
 `01101011`01101001`01101110`01100100 **and dismissal of any kind**  
 `01001001`01100110 | `01001001 | `01100001`01110011`01101011 | `01111001`01101111`01110101 |  
 `01110100`01101111 |  
 `01110100`01110010`01100001`01101110`01110011`01100011`01100101`01101110`01100100 **if I ask**  
**you to transcend**  
 `01010100`01101111 | `01100110`01101001`01100111`01101000`01110100 |  
 `01100110`01101111`01110010 | `01110100`01101000`01100101 **to fight for the**  
 `01001100`01101111`01110011`01110100 **lost**  
 `01010011`01101001`01101100`01100101`01101110`01100011`01100101`01100100 **silenced**  
 `01010101`01101110`01110011`01100101`01100101`01101110 **unseen**  
 `01000011`01101111`01110101`01101100`01100100 | `01111001`01101111`01110101 | **Could you**  
**challenge binary forms?**  
 `01100011`01101000`01100001`01101100`01101100`01100101`01101110`01100111`01100101 |  
 `01100010`01101001`01101110`01100001`01110010`01111001 |  
 `01100110`01101111`01110010`01101101`01110011`00111111  
 `01001001`01101110 | `01100001 | `01110111`01101111`01110010`01101100`01100100 |  
 `01100110`01110101`01101100`01101100 | `01101111`01100110 |  
 `01110111`01101001`01110100`01101110`01100101`01110011`01110011`01101001`01101110`01100111 **in a**  
**world full of witnessing**  
 `01100011`01110010`01110101`01101101`01100010`01101100`01101001`01101110`01100111 |  
 `01110011`01101001`01101110`01100111`01101100`01100101 |  
 `01110011`01110100`01101111`01110010`01101001`01100101`01110011 **crumbling single stories**  
 `01000010`01110010`01100101`01100001`01110100`01101000`01101001`01101110`01100111 |

`01101110`01100101`01110111 | `01100001`01101001`01110010 **breathing new air**  
 `01000011`01101000`01100001`01101100`01101100`01100101`01101110`01100111`01101001`011011  
 10`01100111 | `01110100`01101001`01100011`01101011`01100101`01100100 |  
 `01100010`01101111`01111000`01100101`01110011 **challenging ticked boxes**  
 `01010010`01101001`01100111`01101000`01101000`01110011 | `01100110`01101111`01110010 |  
 `01100001`01101100`01101100 | `01100110`01101111`01110010`01101101`01110011 **rights for all**  
**forms**  
 `01000111`01101001`01110110`01100101`01101110 | `01110111`01100101`01101100`01101100 |  
 `01100100`01100101`01110011`01100101`01110010`01110110`01100101`01100100 |  
 `01110100`01101001`01101101`01100101 **given well deserved time**  
 `01010100`01101111 |  
 `01100101`01111000`01110000`01100101`01110010`01101001`01100101`01101110`01100011`011001  
 01 | `01110100`01101000`01100101 | `01110011`01101111`01100110`01110100 |  
 `01110011`01110000`01101111`01110100`01110011 **to experience the soft spots**  
 `01001111`01100110 | `01101100`01101111`01110110`01100101`01100100 |  
 `01100100`01100101`01100001`01110010 |  
 `01100010`01100101`01101001`01101110`01100111`01110011 **of loved dear beings**  
 `01000010`01100101`01111001`01101111`01101110`01100100 | `01011001`01100101`01110011 |  
 `01100001`01101110`01100100 | `01001110`01101111 **beyond Yes and No**  
 `01001101`01100001`01101011`01101001`01101110`01100111 |  
 `01101101`01101111`01110010`01100101 | `01101110`01101111`01101001`01110011`01100101  
**making more noise**  
 `01001110`01101111 | `01101101`01101111`01110010`01100101 |  
 `01110011`01101001`01101100`01100101`01101110`01100011`01100101 **no more silence**  
 `01001001`01101110 | `01100101`01100001`01100011`01101000 |  
 `01101000`01101111`01110000`01100101 **in each hope**  
 `01000011`01100001`01101110 | `01110111`01100101 |  
 `01110000`01100001`01110101`01110011`01100101 | `01100110`01101111`01110010 | `01100001 |  
 `01101101`01101111`01101101`01100101`01101110`01110100`00111111 **can we pause for a**  
**moment?**  
 `01000001`01101110`01100100 |  
 `01110010`01100101`01101100`01101111`01100011`01100001`01110100`01100101 |  
 `01101111`01110101`01110010 | `01110000`01100001`01101001`01101110 **and relocate our pain**  
 `01010000`01100101`01110010`01101000`01100001`01110000`01110011 |  
 `01100110`01101001`01101110`01100100`01101001`01101110`01100111 | `01100001 |  
 `01101000`01101111`01101101`01100101 **perhaps finding a home**  
 `01000001 | `01101110`01100101`01110111 | `01101100`01100101`01100001`01110011`01100101 **a**  
**new lease**  
 `01000110`01101100`01101111`01101111`01110010`01110011 | `01100001`01101110`01100100 |  
 `01110010`01101111`01101111`01100110`01110011 | `01101111`01100110 |  
 `01110101`01101110`01100100`01100101`01110010`01110011`01110100`01100001`01101110`011001  
 00`01101001`01101110`01100111 **floors and roofs of understanding**  
 `01010111`01101000`01100001`01110100 |  
 `01101000`01100001`01110000`01110000`01100101`01101110`01110011 |  
 `01101110`01100101`01111000`01110100`00111111 **What happens next?**

`01010111`01101000`01100101`01101110 | `01110111`01100101 |  
 `01100110`01101001`01101110`01100001`01101100`01101100`01111001 |  
 `01100111`01100101`01110100 | `01110100`01101111 |  
 `01110010`01100101`01110011`01110100`00111111 **when we finally get to rest?**  
 `01001110`01101111 | `01101101`01101111`01110010`01100101 |  
 `01110000`01110101`01101110`01100011`01101000`01100101`01110011 |  
 `01100011`01101111`01101101`01101001`01101110`01100111 | `01100110`01101111`01110010 |  
 `01111001`01101111`01110101 | `01100001`01101110`01100100 |  
 `01101101`01100101 **no more punches coming for you and me**  
 `01001000`01110101`01101101`01100001`01101110`01101001`01110100`01111001 |  
 `01100010`01100101`01101100`01101111`01101110`01100111`01110011 | `01110100`01101111 |  
 `01110101`01110011 **humanity belongs to us**  
 `01010011`01101000`01101001`01101110`01101001`01101110`01100111 |  
 `01110100`01101000`01110010`01101111`01110101`01100111`01101000 |  
 `01101111`01110101`01110010 |  
 `01110111`01101001`01101110`01100100`01101111`01110111`01110011 **shining through our windows**  
 `01000100`01100101`01100001`01110010 | `01101111`01101110`01100101`01110011`00101100 **Dear ones,**  
 `01010111`01100101 | `01100001`01110010`01100101 | `01101110`01101111`01110100 |  
 `01100001`01101100`01101111`01101110`01100101 | `01101000`01100101`01110010`01100101 **we are not alone here**  
 `01001110`01101111 | `01101101`01101111`01110010`01100101 |  
 `01110000`01100101`01100010`01100010`01101100`01100101`01110011 | `01101001`01101110 |  
 `01101111`01110101`01110010 | `01110011`01101000`01101111`01100101`01110011 **no more pebbles in our shoes**  
 `01010100`01101000`01100001`01110100`1000000011001`01110011 |  
 `01110111`01101000`01100001`01110100 |  
 `01101000`01100001`01110000`01110000`01100101`01101110`01110011 |  
 `01101110`01100101`01111000`01110100`00101110 **that's what happens next**  
 `01000101`01101110`01100100`01110101`01110010`01101001`01101110`01100111 |  
 `01101000`01100001`01110011 | `01101110`01100101`01110110`01100101`01110010 |  
 `01100110`01100001`01101001`01101100`01100101`01100100 **enduring has never failed**  
 `01010111`01101000`01100101`01101110 | `01110111`01100101 |  
 `01100001`01110011`01101011`01100101`01100100 |  
 `01101111`01110101`01110011`01100101`01101100`01110110`01100101`01110011 **when we asked ourselves**  
 `01010111`01101000`01100001`01110100 | `01101100`01101001`01100110`01100101 |  
 `01110111`01100101 | `01110111`01100001`01101110`01110100 | `01110100`01101111 |  
 `01101100`01101001`01110110`01100101`00111111 **What life we want to live?**  
 `01010010`01100101`01101101`01100101`01101101`01100010`01100101`01110010`10000000100110  
**Remember...**  
 `01000001`01101100`01101100 | `01110100`01101000`01100101 |  
 `01110100`01101000`01101001`01101110`01100111`01110011 **all the things**  
 `01010111`01100101 | `01100100`01101001`01100100 **we did**

```

`00101000`01001111`01101110 |
`01110000`01110101`01110010`01110000`01101111`01110011`01100101`00101001 (on purpose)
`01010100`01101000`01100101`01110010`01100101 | `01101000`01100001`01110011 |
`01100001`01101100`01110111`01100001`01111001`01110011 |
`01100010`01100101`01100101`01101110 | `01100001 |
`01110010`01100101`01100001`01110011`01101111`01101110`00101110 there has always been a
reason
`01000010`01100101`01111001`01101111`01101110`01100100 | `01110100`01101000`01100101 |
`01110011`01101011`01111001 beyond the sky
`01001101`01100001`01101011`01101001`01101110`01100111 | `01110100`01101000`01100101 |
`01100100`01100101`01100011`01101100`01100001`01110010`01100001`01110100`01101001`01101111`01101110
making the declaration
`01010111`01100101 | `01101110`01100101`01100101`01100100 we need
`01000110`01101111`01110010 | `01101001`01101110 | `01101111`01110101`01110010 |
`01110011`01110100`01101111`01110010`01101001`01100101`01110011 for in our stories
`00101000`01010010`01100101`01101101`01100101`01101101`01100010`01100101`01110010`001010
01 (Remember)
`01000101`01110110`01100101`01110010`01111001 |
`01101101`01101111`01101101`01100101`01101110`01110100 every moment
`01001100`01100101`01100100 | `01110101`01110011 led us
`01001000`01100101`01110010`01100101 HERE

```

In contemplating the effects binary constructs have in our lives, we initially reflected on the influence of unseen frameworks that simultaneously unify and maintain prevailing ideologies we are a part of. If we were to unveil the underlying mechanics of binary truths, might we then begin to unravel the damaging effects that singularity perpetuates in our relationships?

The development of binary code was introduced by Gottfried Wilhelm Leibniz – a prominent 17<sup>th</sup> – century philosopher and mathematician who laid the groundwork for modern computing technologies (Strickland, 2023). Leibniz's binary system was based on the simple yet complex concept where any number or operation could be expressed using only two symbols: 0 and 1. This revolutionary idea provided the theoretical foundation for binary systems used in modern computers and smartphones like our beloved iPhones and Androids, to name a few. Although Leibniz's ideas were not immediately implemented during his time, binary code remains the foundational data format for computers and other digital applications, which are the visual representation of duality in contemporary society (Brancato, 2021). Each symbol in binary code, known as a bit, represents a specific state – either active (1) or inactive (0). This binary schema is a significant part of global operations serving as the glue holding modern society together.

The poem "Sharp Edges Led Us Here" was written as a metaphorical and literal exploration of binary code intersecting with artistic expression: poetry. We contemplated the provocative question: Without the foundational structure of binary code, could the world we live in collapse? Adopting this binary framework as a metaphor, the encoding and processing of diverse forms of data is possible – from the texts we read to the videos we watch, and the software commands we execute. The

acknowledgment of these processes remains unseen, yet they fundamentally shape every second of our lives.

In response to the felt damages of living in a world where binary categories still inflict pain – the sharp edges, we integrated software encoding, systemic thinking, and poetic expression to create this piece. The poem centred on themes of visibility, humanity, and transformation. Opening with a plea for recognition – "Can you see me?" – we invite the reader to challenge simplistic binary constructs in favour of embracing the complexities that are central to the human experience.

As the poem evolves, we advocate for a shift, a movement away from the normative towards a more inclusive understanding of humanity. Once the poem was written, the second author who is a software engineer used Python, a software program that supports programming paradigms in several domains like web development, automation, data analysis, and machine learning to name a few (Van Rossum & Drake, 2009). In the syntax below, a Unicode representation of each character in the poem was used to systematically generate a binary representation of the entire text.

Syntax Commands:

```
# using join() + ord() + format()
# Converting String to binary

res=""
for i in test_str:
    if i==" ":res=res+" | "

    elif i=="\n": res=res+i

else:
    res=res+ "" + format(ord(i), '08b')

# printing result
print("The string after binary conversion : " + str(res))

with open("PoemOutput.txt", "w") as text_file:
    text_file.write(str(res))
```

Combining binary code with poetic structure aligned across each line offers readers an elusive glimpse behind the curtain, the previously invisible fundamental processes are now rendered visible. The construction of coding representation in every line of the poem is relational and anticipatory. From unseen to seen, the interaction of language and numbers directly parallels the textual content of the poem, each line bridges two realms typically seen as separate. By placing the code before the text, we not only emphasise the relational set of juxtapositions but also construct a visual scene to stimulate thought by contrast of order, themes, and characters.

What if we were to transcend the binary world and engage more deeply in challenging the status quo? "Sharp Edges Led Us Here" is the representation of our efforts – from unseen to seen.

## References

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## About the authors

**Danna Abraham** works as an educator at Alliant International University in San Diego, CA. She is the founder of the Research Initiative for Storytelling Engagement (RISE) lab where she uses creative energy to play with knowledge constructs and exploring the effects of gender inequalities in higher education. She wakes up every day hoping to support the development of therapists' professional and personal identities.

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**Tarun Abraham** works as a technical leader in the software technology field, with a specialisation in leveraging data and Artificial Intelligence (AI) to drive business agility. In his work, he is committed to investigating and addressing the ethical challenges posed by AI technologies. Inspired by Mahatma Gandhi's assertion that 'Knowledge without character is a deadly sin,' Tarun is deeply engaged in the critical exploration of how to instill 'character' into AI systems which highlight his commitment to understanding how AI evolves in a manner that is both ethical and socially responsible.

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