The background is a vibrant, abstract painting with thick brushstrokes in shades of red, blue, yellow, and green. The colors are layered and blended, creating a dynamic and textured visual effect. The overall composition is energetic and expressive.

# Queering Machine Learning

Shakir Mohamed  
*shakirm.com* | *@shakir\_za*





**Why are we here  
at Queer in AI?**

**Why do we gather in this way?  
Why do we organise?**





**Senate House at the University of the Witwatersrand, Johannesburg**



# What is Machine Learning?





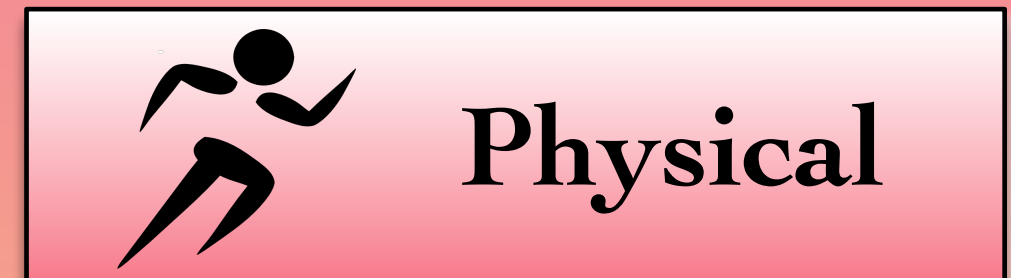
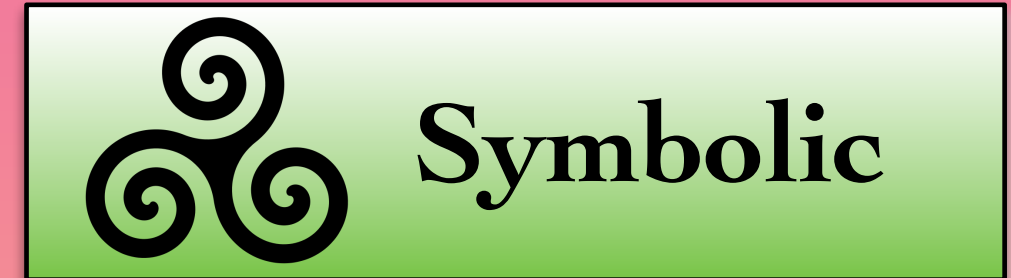
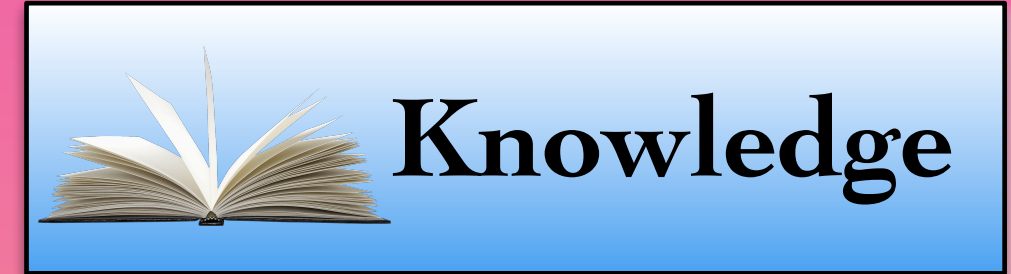
# Computer Science as Empirical Inquiry: Symbols and Search

Allen Newell and Herbert A. Simon

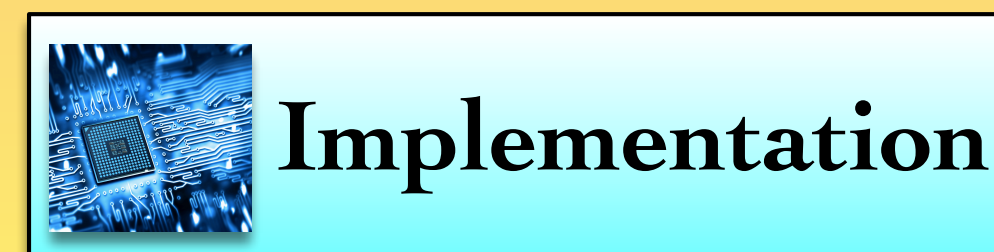
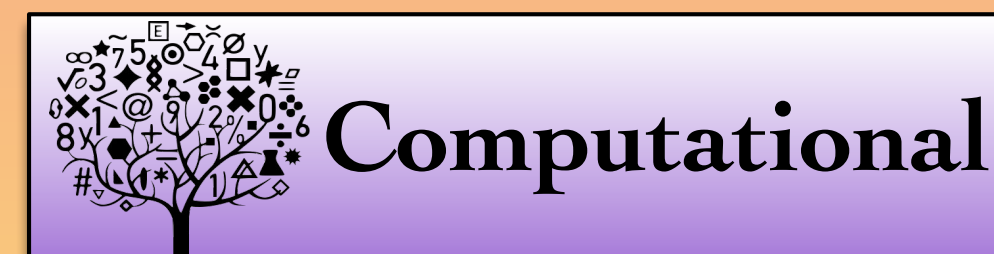
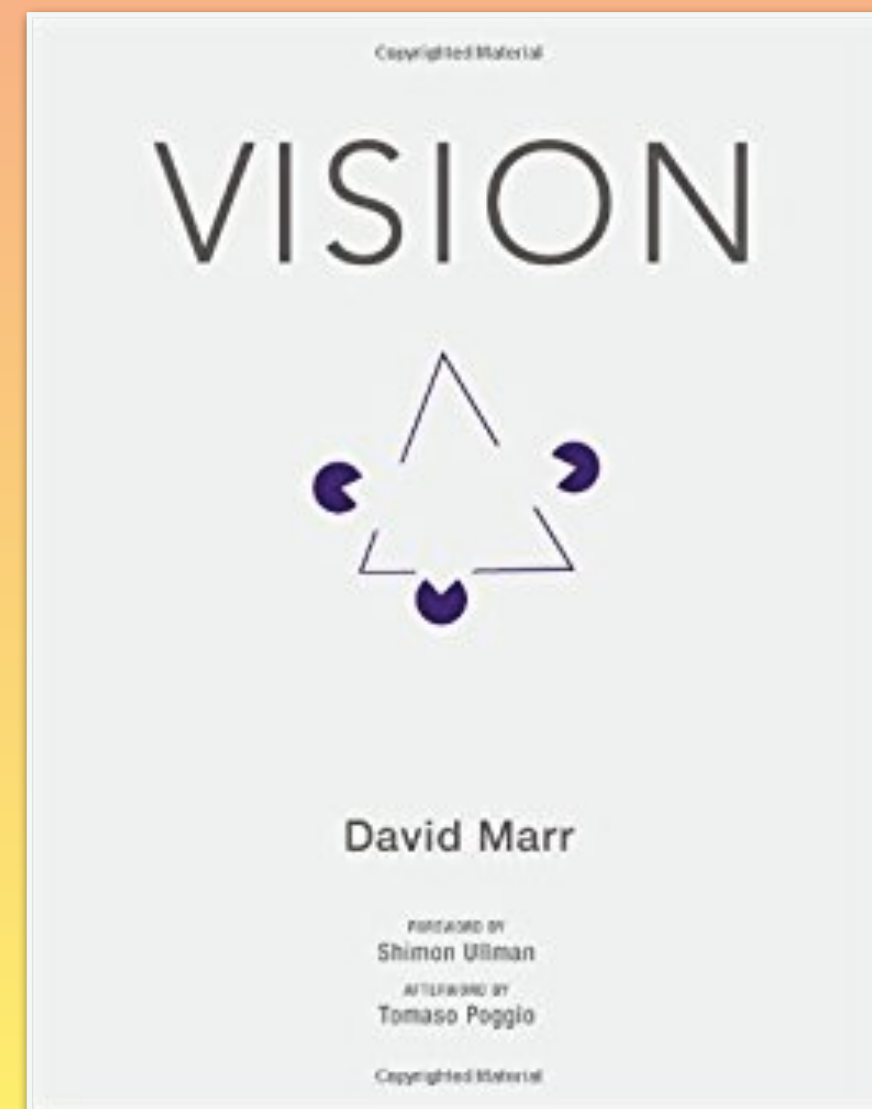


Computer science is the study of the phenomena surrounding computers. The founders of this society understood this very well when they called themselves the Association for Computing Machinery. The machine—not just the hardware, but the programmed, living machine—is the organism we study.

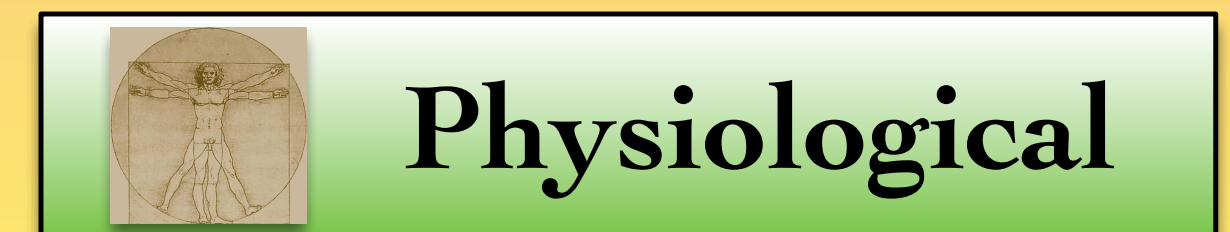
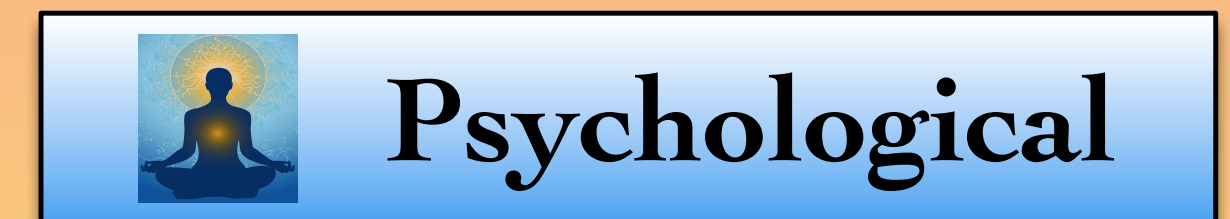
This is the tenth Turing Lecture. The nine persons who preceded us on this platform have presented nine different views of computer science. For our organism, the machine, can be studied at many levels and from many sides. We are deeply honored to appear here today and to present yet another view, the one that has permeated the scientific work for which we have been



## Classical Cognitive Architecture



## Marr's Levels of Analysis



## Sun's Phenomenological Levels



# Products to Principles

## Applications

**Assistive  
Technology**

**Advancing  
Science**

**Climate and  
Energy**

**Healthcare**

**Fairness and  
Safety**

**Autonomous  
systems**

## Reasoning

**Planning**

**Explanation**

**Rapid Learning**

**World  
Simulation**

**Objects and  
Relations**

## Information

**Uncertainty**

**Information Gain**

**Causality**

**Prediction**

## Principles

**Probability  
Theory**

**Bayesian  
Analysis**

**Hypothesis  
Testing**

**Estimation  
Theory**

**Asymptotics**



# Epistemic Values

Generalisability of a theory,  
reproducibility, falsification



Political, social, cultural

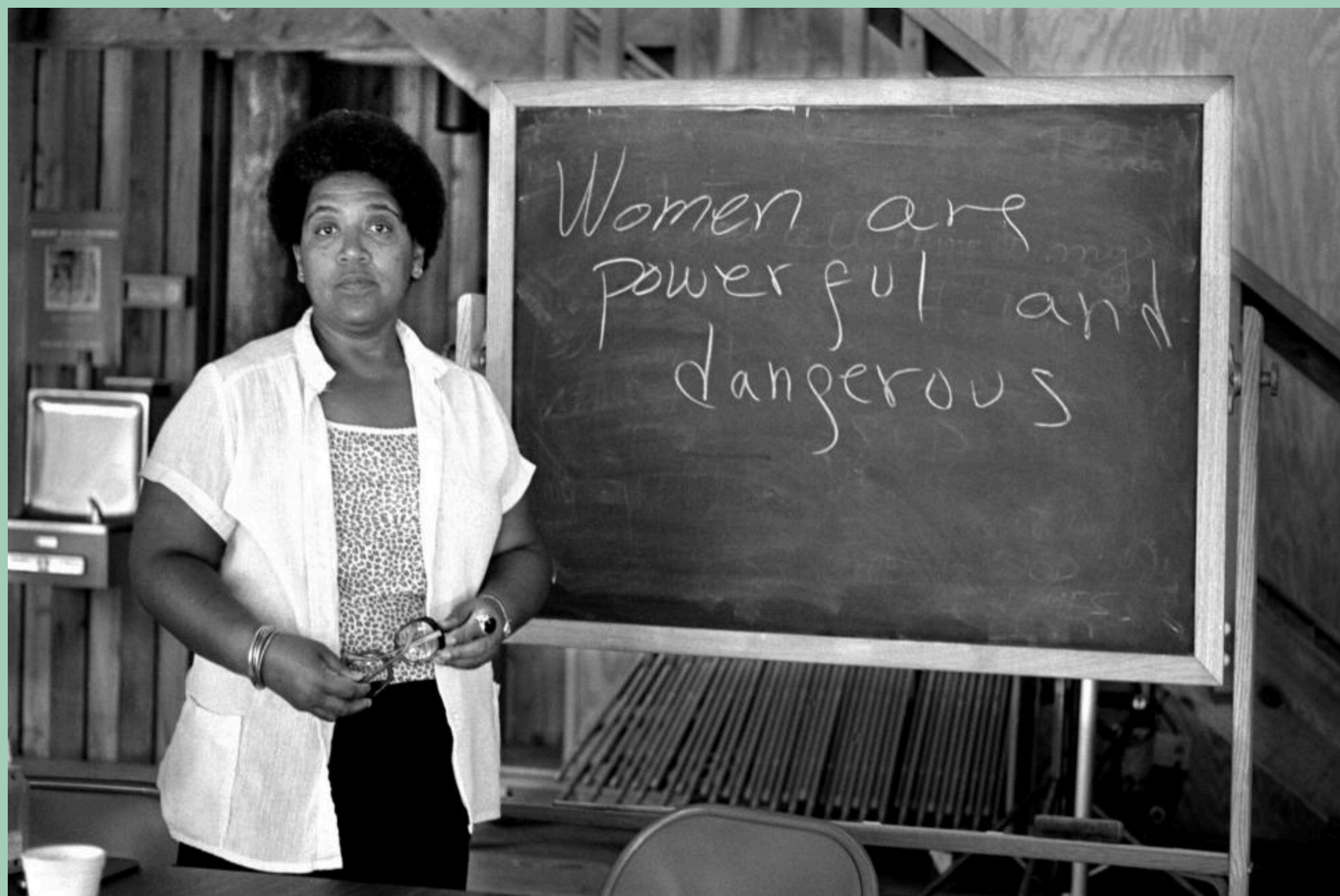
# Contextual Values





Edw. Carpenter



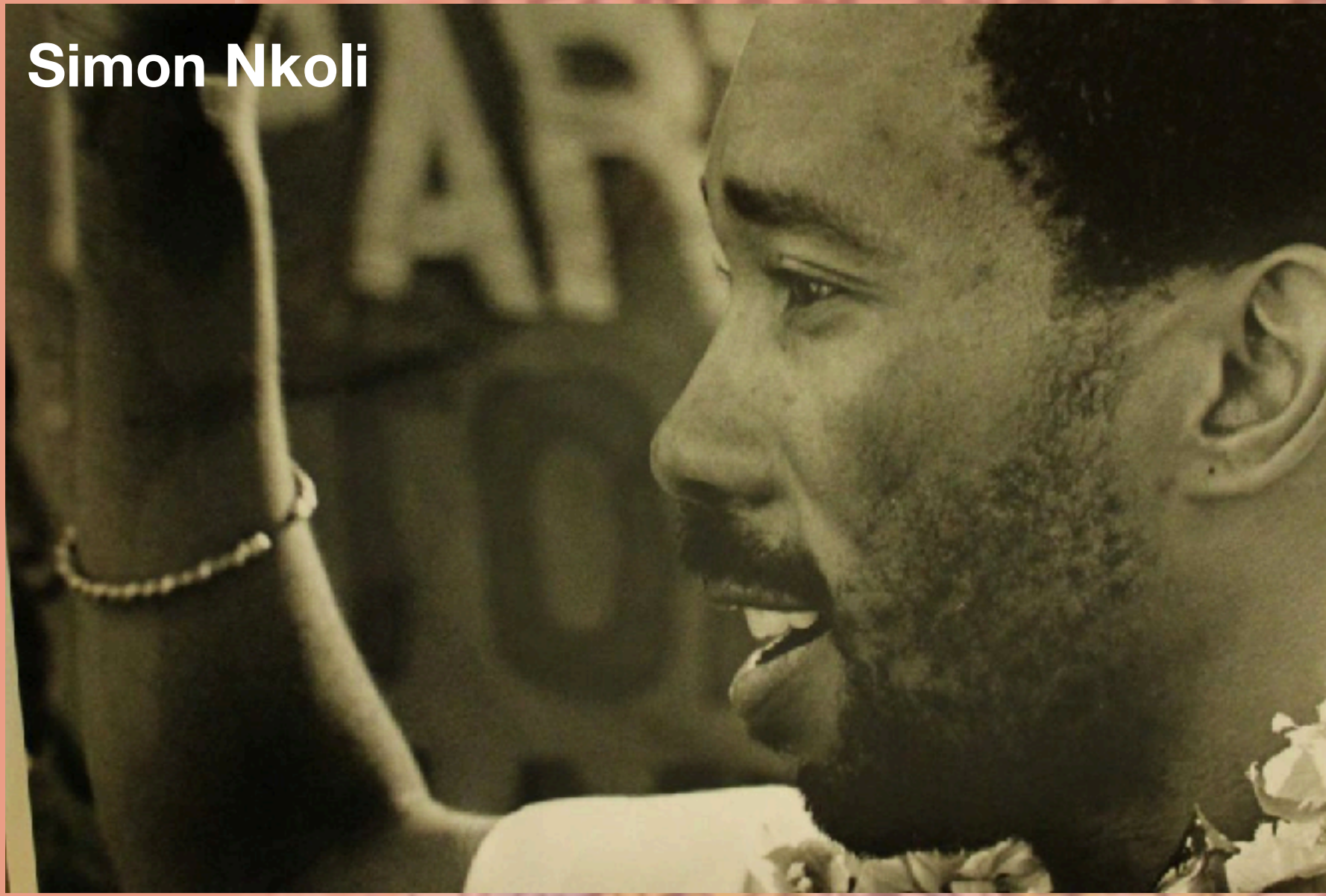


For those of us who live at the  
shoreline  
standing upon the constant edges of  
decision crucial and alone  
for those of us who cannot indulge  
the passing dreams of choice  
who love in doorways coming and  
going  
in the hours between dawns  
looking inward and outward  
at once before and after  
seeking

a now that can breed Futures

...





Simon Nkoli



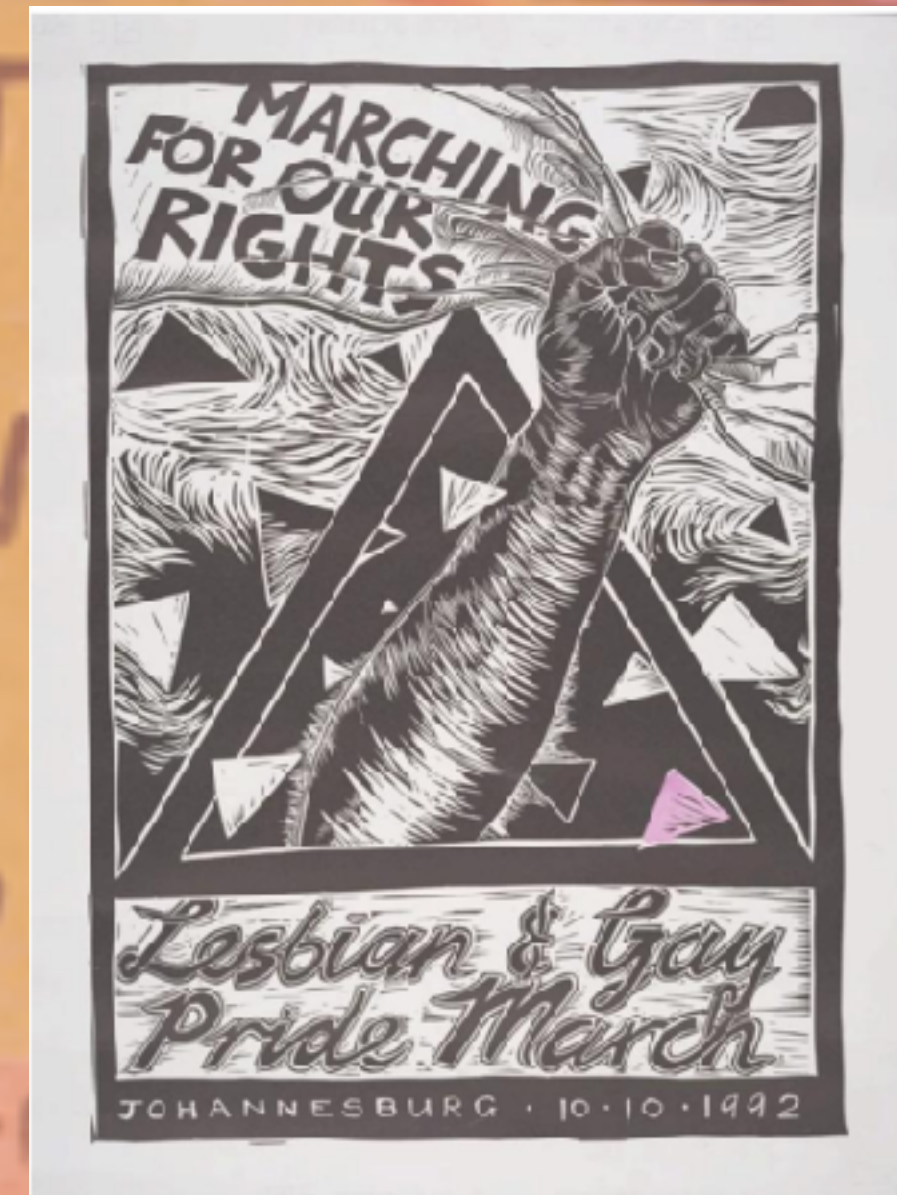
Peter Tatchell



Jason Jones



Tongzhi | 同志 activism



Bev Ditsie





THE  
DESCENT OF MAN,  
AND  
SELECTION IN RELATION TO SEX.

BY CHARLES DARWIN, M.A., F.R.S., &c.

IN TWO VOLUMES.—Vol. I.

WITH ILLUSTRATIONS.

LONDON:  
JOHN MURRAY, ALBEMARLE STREET.

1871.

*[The right of Translation is reserved.]*



# Queering our Technical Field







Belonging





Alone





**Solitude**






**Critical and Responsible**



Joy



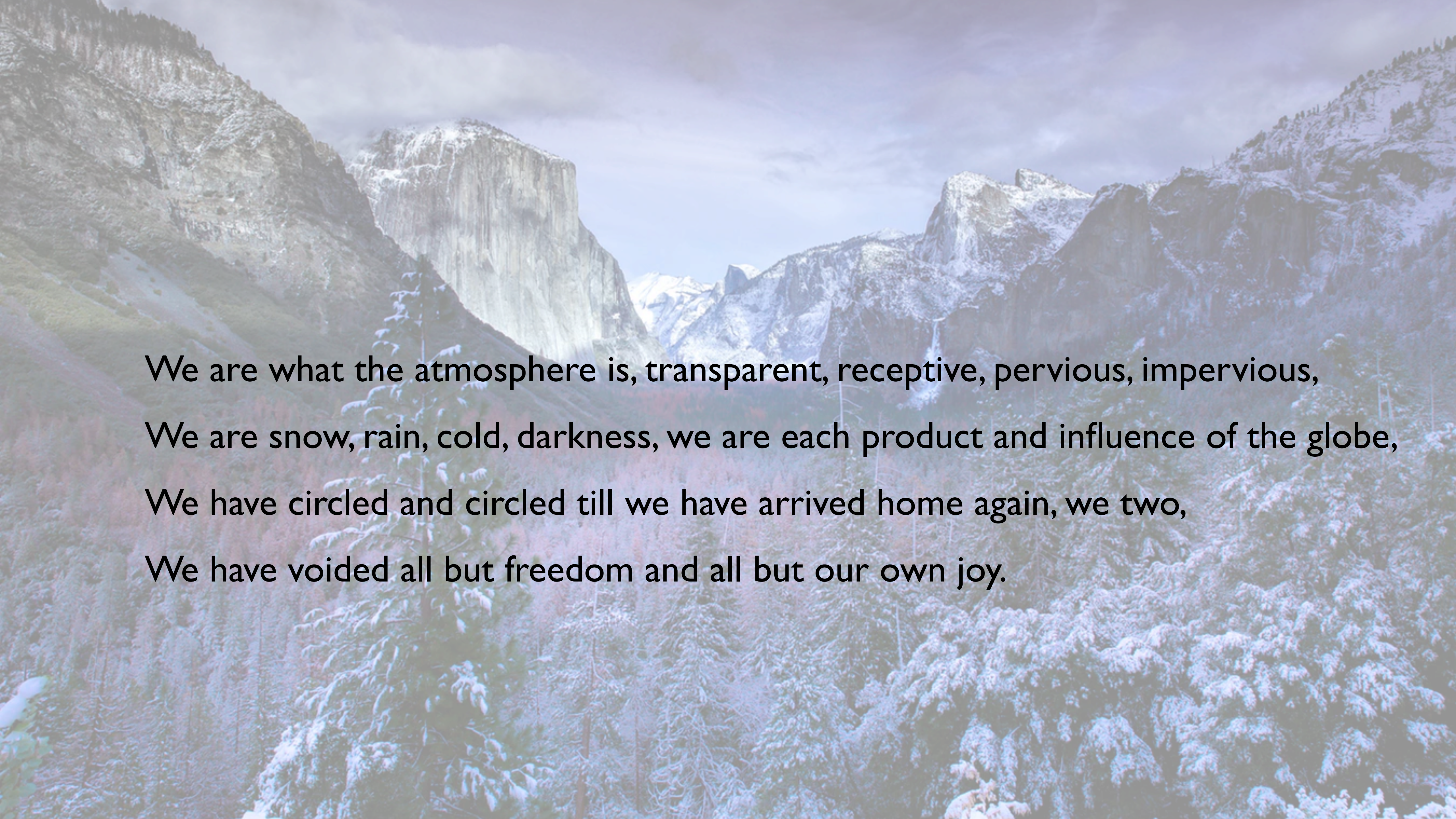


The background is a vibrant, abstract painting with thick brushstrokes in shades of red, blue, yellow, and green. The colors are layered and blended, creating a sense of movement and energy. The overall composition is dynamic and expressive.

**Our strength:  
A unique view  
on ML.**

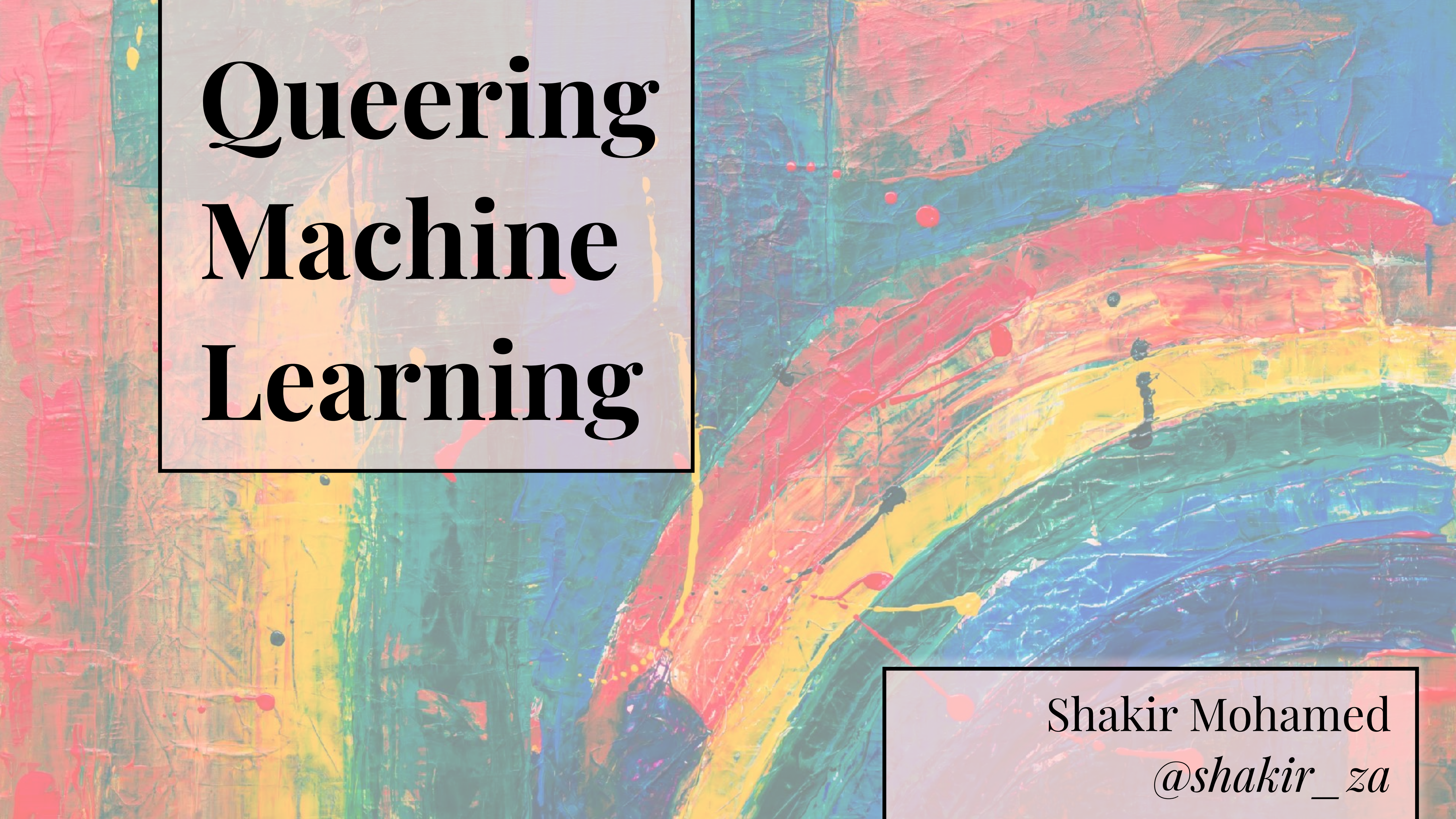
**Community of  
nurture and  
belonging.**





We are what the atmosphere is, transparent, receptive, pervious, impervious,  
We are snow, rain, cold, darkness, we are each product and influence of the globe,  
We have circled and circled till we have arrived home again, we two,  
We have voided all but freedom and all but our own joy.



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# Some references and books

