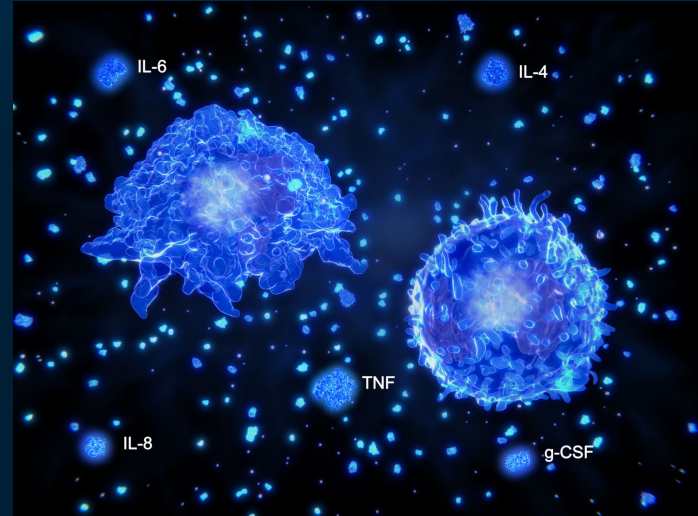


# Automation and Workflows: Cytokine Data Simulation

Patrick Phan

# Initial objectives

- Simulation of the human body
- Modelling immune response over time
- Visualization of cytokines interacting with receptors



# Current Functionality

- Exploratory website to interact with data on many different cytokines
- Contains tools to help learn about baseline cytokine levels





# Challenges + Future goals

- Data modelling via different distributions
  - Limited datasets
  - Little information on cytokine data relating to physiological and mental conditions
- 
- Further optimization of the streamlit website
    - More user-friendly UI
    - Collapsible tabs
  - Add functionality to change data based on conditions such as “Generalized anxiety disorder”
  - Define each cytokine in a “help” menu

The background is a dark blue gradient. It is decorated with various geometric elements: small squares in teal, pink, and orange, and thin white vertical lines of varying lengths. These elements are scattered across the frame, creating a modern, minimalist aesthetic.

# Thank you!