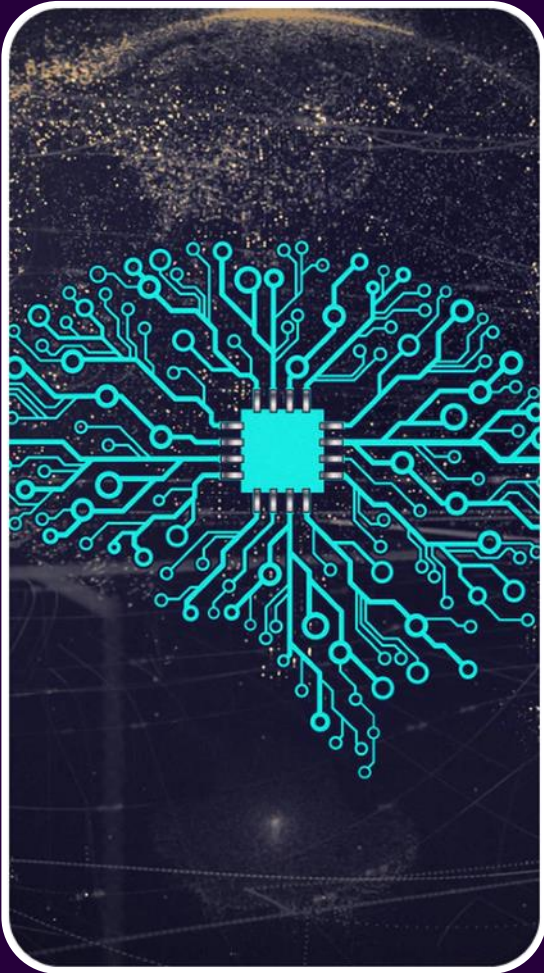


**Cyber security: Emerging threats and risks with the increased use of virtual platforms to conduct work, and potential vulnerabilities of the entire world.**

**Professor Tshilidzi Marwala**



UNIVERSITY  
OF  
JOHANNESBURG



## Cyber Security

**Technologies, processes, and practices designed to protect digital platforms from attack, damage, or unauthorized access.**



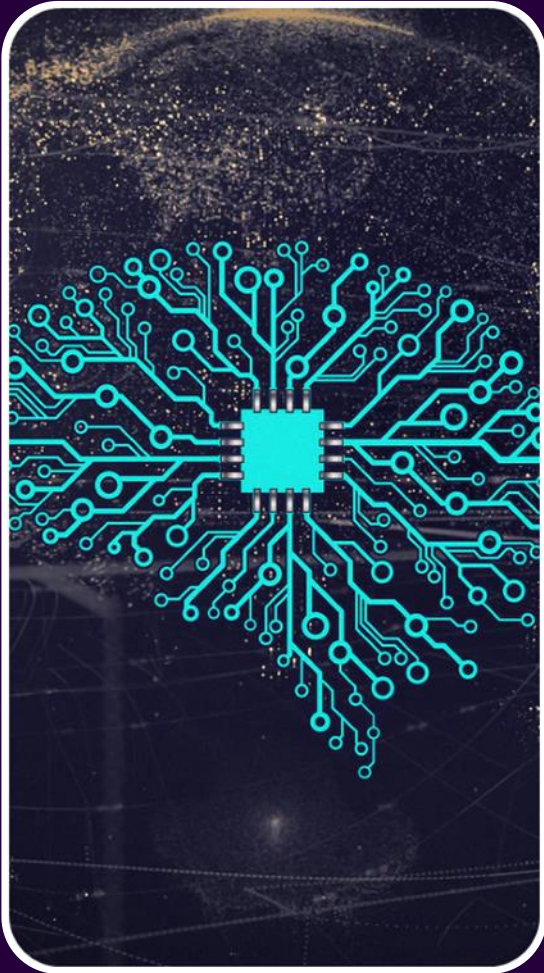


## Dan Coats

“A major attack on our cyber systems could shut down our critical infrastructure - financial systems, communications systems, electric grids, power plants, water treatment centers, transportation systems and refineries - that allows us to run our economy.”







## Cyber Attacks at the Start of the Pandemic

**50.1% increase in cyber-attacks and an associated 30,000 cyber-attacks**

**600% increase in phishing attacks**

**300,000% increase in cyber threats**

**18 million malware and phishing emails blocked**



# Recommendations of the PC4IR

- Invest in human capital
- Create an AI Institute
- Advanced manufacturing
- **Secure and avail data**
- Incentivise future industries
- Build 4IR infrastructures
- Policy and legislation
- Coordination council

