ENGINEER'S DAY 2024

IEI ALIGARH LOCAL CENTRE

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AI and Sustainable Development

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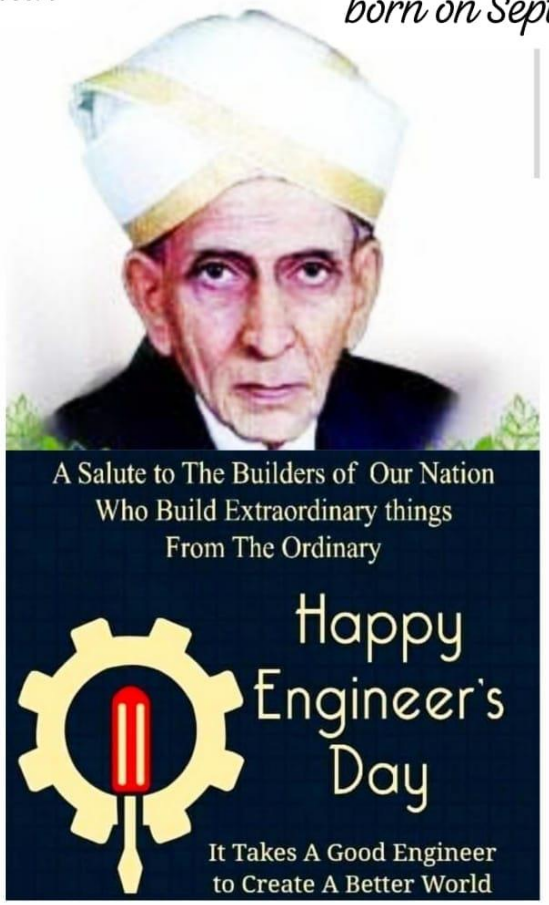
Sir Mokshagundam Visvesvaraya with Maharaja Mysore

An engineer, administrator and statesman

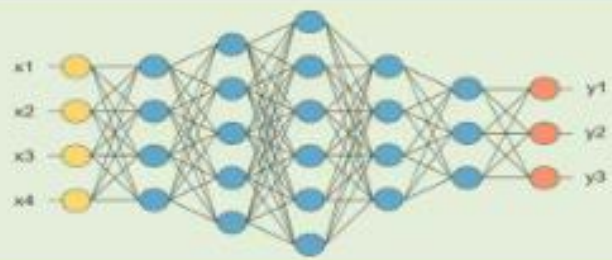
Tribute to Bharatratna Sir M. Visvesvaraya (1861 - 1962), who was born on September 15.



Artificial intelligence

Machine learning

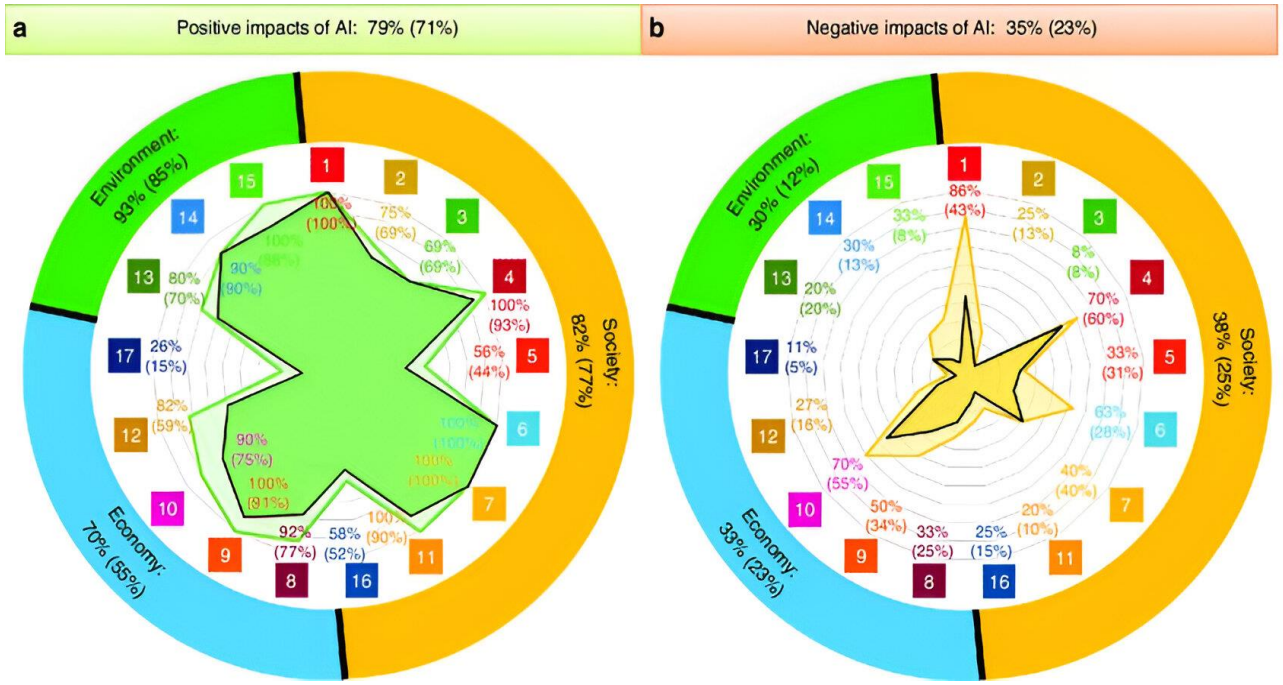
Deep learning



SUSTAINABLE DEVELOPMENT GOALS

Impact on Society

- AI has the potential to support **societal improvements** by contributing to **134 SDG targets**, such as reducing poverty, improving education, and providing clean water.
- AI technologies can help **optimize smart cities**, efficiently manage resources, reduce carbon footprints, and promote renewable energy use.
- However, AI could negatively affect **59 SDG targets**, particularly by increasing **inequalities** and causing **job displacement** for those lacking digital skills.
- The **high cost and resources** needed for advanced AI can widen the gap between **developed and developing nations**, exacerbating global inequality.



Economic Implication

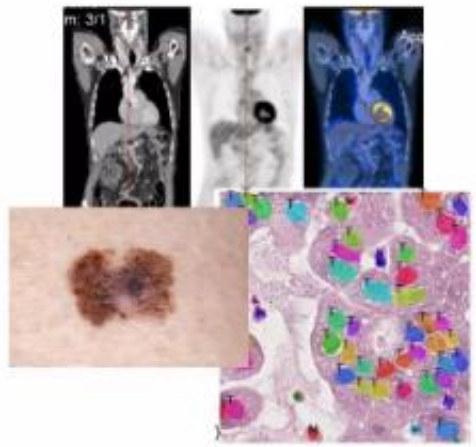
- AI has the potential to accelerate the achievement of **134 targets** across all **17 SDGs,** such as eradicating poverty, improving education, and providing clean water.
- AI-driven technologies can optimize **smart cities**, manage resources efficiently, reduce carbon footprints, and promote renewable energy integration.
- On the downside, AI could negatively impact **59 SDG targets**, particularly by widening **economic inequalities** and causing **job losses** for workers lacking digital skills.
- Advanced AI may increase the gap between **developed and developing nations** due to the high cost and resource requirements of the technology.

Environmental Impact of AI

- **AI** can play a crucial role in **climate action** and **resource management** by monitoring and predicting environmental changes such as deforestation and desertification.
- AI-powered **satellite imagery analysis** can help identify areas at risk of environmental degradation, enabling **proactive ecosystem preservation** efforts.
- However, the **energy consumption** of AI technologies, particularly in **data centers**, can contribute to increased **carbon emissions**.
- To avoid compromising environmental goals, it's essential to focus on making **AI systems more energy-efficient** as they continue to grow.

AI can improve health care and make quality care more accessible

Collecting patient history



Automated diagnosis

Treatment recommendations

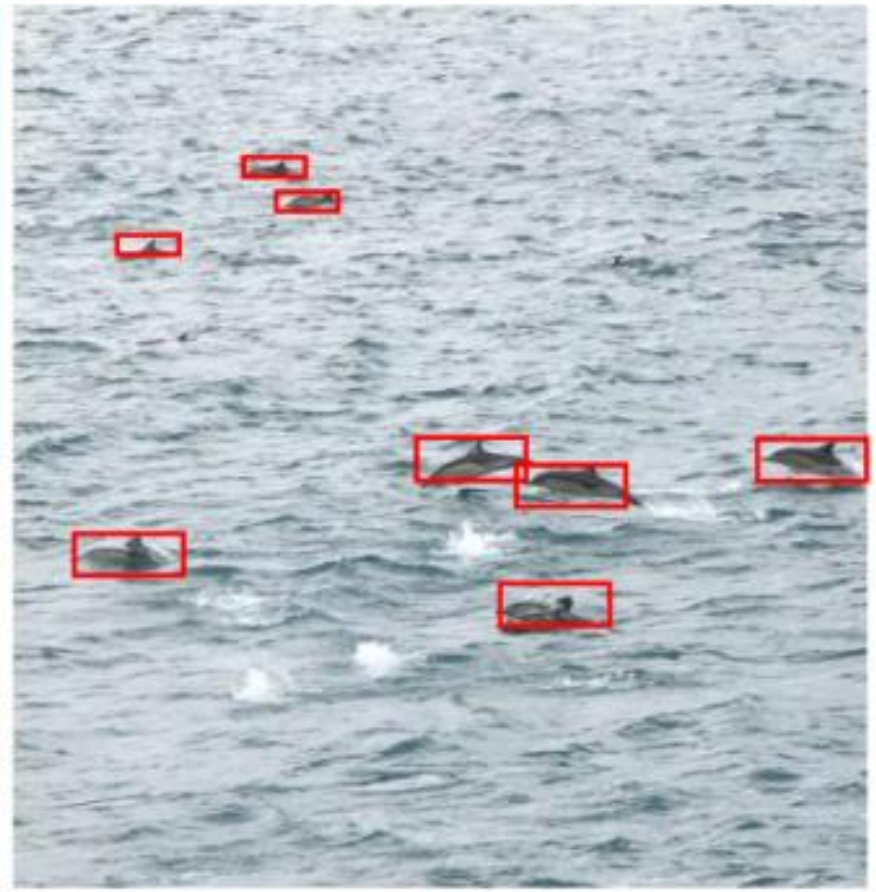
Staff/resource allocation

Surgical robots

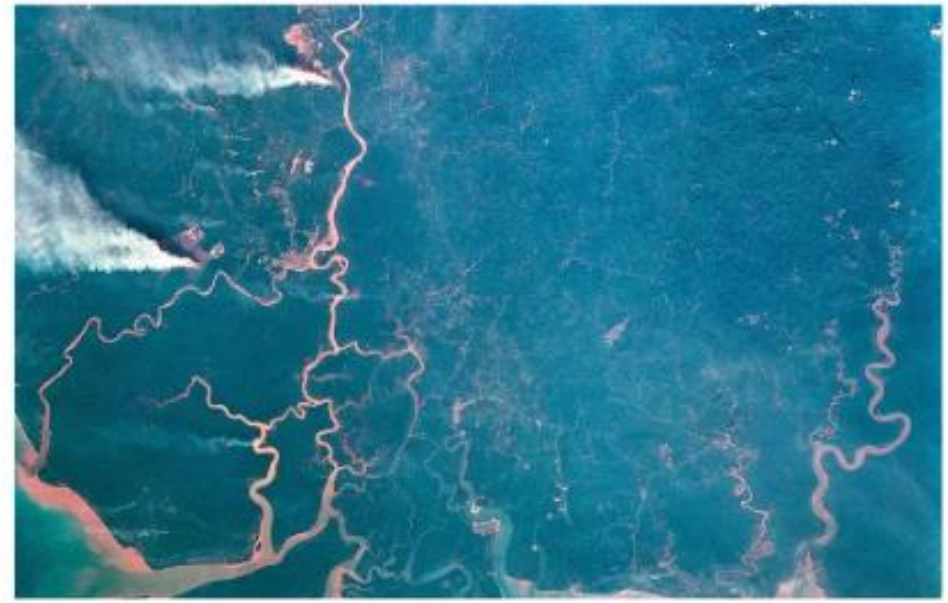
Therapy development

Virtual health assistants

AI can monitor wildlife



AI can facilitate disaster prediction, assessment and response planning



AI **for** sustainability

Sustainability **of** AI ?

Thank You