Presentation Introduction – Vikrant's Perspective

Reintroducing the Topic

Our project examines the **Environmental Impact of AI**, a critical issue as AI adoption accelerates across industries. While AI brings efficiency and innovation, it also has **significant environmental costs**—notably high energy consumption, carbon emissions, and the depletion of natural resources. As AI models grow larger and more complex, their sustainability challenges demand urgent ethical considerations.

Framing the Issue from My Perspective

As the **Research & Analysis Lead**, my role has been to analyze AI's environmental trade-offs and explore ethical implications. AI is often seen as a solution to global problems, but ironically, its own development **creates environmental burdens** that impact communities worldwide. Training a large-scale AI model, for example, can emit as much carbon as five cars over their lifetime. Data centers supporting AI require massive electricity consumption, much of which comes from non-renewable sources.

AI Ethics Principles

This issue ties directly to key **AI ethics principles**, including:

- **Fairness:** AI should benefit all, but environmental costs disproportionately affect **low-income communities and developing nations** with limited access to clean energy.
- **Accountability:** Tech companies and researchers must take responsibility for AI's ecological footprint and actively pursue **Green AI initiatives** to mitigate harm.
- **Transparency:** The environmental impact of AI systems should be **publicly disclosed**, allowing consumers, policymakers, and stakeholders to make informed decisions about their use.

If we hold AI developers accountable to these ethical principles, we can **push for more responsible and sustainable AI practices**.

Unintended Stakeholders & Impacts

Beyond direct AI users, several **unintended stakeholders** face ethical harms due to AI's environmental impact:

- **Communities near Data Centers:** The increasing demand for **cooling systems and electricity** strains local water and energy resources, disproportionately affecting regions with limited infrastructure.
- **Workers in Resource Extraction:** Mining for rare earth materials used in AI hardware leads to **labor exploitation, habitat destruction, and pollution**, affecting vulnerable populations.
- **Developing Nations:** AI's energy-intensive nature worsens the **digital divide**, where wealthy nations access advanced AI while others struggle with infrastructure constraints and environmental degradation.

Common-Sense View & Personal Values

At its core, AI should advance society **without leaving long-term environmental harm**. It doesn't make sense for a technology built to **enhance efficiency** to contribute to an unsustainable future. We must ensure that AI development aligns with principles of **sustainability, fairness, and accountability**—prioritizing not just short-term innovation but long-term **planetary well-being**.

From my perspective, this issue is about **responsibility**. As researchers and developers, we need to ask: *Are we building AI in a way that respects future generations?* If AI is truly meant to benefit humanity, we must commit to making it environmentally sustainable.

This perspective has shaped my contribution to the project, and I look forward to discussing potential **solutions, policy recommendations, and ethical AI frameworks** in our research.