

## AI Application for 2030: AI-Powered Climate Engineering

### The Problem It Solves

Climate change is causing extreme weather, rising sea levels, and environmental damage. We need smarter ways to manage the planet's climate and reduce carbon emissions.

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### AI Workflow

- **Data Inputs:** Satellite images, weather sensors, CO<sub>2</sub> emission stats, ocean and air quality data
  - **AI Model:** Deep reinforcement learning that simulates and predicts climate patterns
  - **Actions:**
    - Controls geoengineering tools like carbon capture plants and ocean fertilization systems
    - Optimizes energy grids for renewable use
    - Advises governments on the best climate actions based on simulations
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### Societal Risks and Benefits

#### Benefits:

- Helps prevent climate disasters by predicting and reacting quickly
- Supports sustainable energy and reduces pollution
- Guides global climate policy with data-driven insights

#### Risks:

- Over-reliance on AI might lead to unintended environmental effects
- Ethical concerns about who controls geoengineering tools
- Privacy concerns with extensive environmental monitoring