

## ML research papers and Drawbacks

Paper	Technical Drawbacks	Non-technical Drawbacks
A Comparative Study of Statistical and Machine Learning Models on Near-Real-Time Daily CO2 Emissions Prediction	<ul style="list-style-type: none"> <li>Models may not generalize well across different regions or emission sources.</li> <li>Limited accuracy in real-time prediction.</li> <li>Data quality and availability can affect model performance.</li> </ul>	<ul style="list-style-type: none"> <li>Lack of policy implications or real-world applicability.</li> <li>Potential resistance from industries due to economic concerns.</li> <li>May not address public awareness or behavior change aspects.</li> </ul>
A Machine Learning Algorithm to Explore the Drivers of Carbon Emissions in Chinese Cities	<ul style="list-style-type: none"> <li>Potential bias due to regional differences in data collection methods.</li> <li>Overfitting risk in machine learning models due to small or non-diverse datasets.</li> <li>The model may not account for all influencing factors of emissions (e.g., social, cultural).</li> </ul>	<ul style="list-style-type: none"> <li>Government regulations may limit access to certain datasets.</li> <li>Findings may not be easily interpretable for policymakers and stakeholders.</li> <li>Ethical concerns regarding data privacy and surveillance.</li> </ul>
Nonparametric Approaches for Analyzing Carbon Emissions: From Statistical and Machine	<p>Nonparametric methods can be computationally expensive for large datasets.</p> <p>These approaches may not always provide clear, interpretable results.</p> <p>The lack of assumptions in nonparametric methods may limit their applicability in some contexts.</p>	<p>Lack of awareness or expertise in industries to adopt these methods.</p> <p>Resistance to new approaches in policy-making.</p> <p>Limited engagement with stakeholders outside academia.</p>

Paper	Technical Drawbacks	Non-technical Drawbacks
Optimization of Carbon Footprint Management Model of Electric Power Enterprises Based on AI Learning Perspectives	<p>AI models require large datasets, which may not be available in some sectors.</p> <p>Model's results may be too theoretical and lack real-world implementation details.</p> <p>Possible limitations in handling dynamic and evolving data over time.</p>	<p>Implementation may be costly for small enterprises.</p> <p>Lack of government incentives for adoption.</p> <p>Public perception of AI-based decisions may lead to skepticism.</p>
Predicting CO2 Emission Footprint Using AI Through Machine Learning	<p>AI-based models may struggle with extreme outliers in emissions data.</p> <p>High computational cost for large datasets and real-time predictions.</p> <p>Difficulty in incorporating external factors (e.g., economic, political changes).</p>	<p>Ethical concerns over AI's decision-making transparency.</p> <p>Potential conflicts with industries resisting AI-driven regulations.</p> <p>Risk of AI-generated policies lacking human-centered considerations.</p>