Al in support of the emerging maritime ecosystem for Canada and the world

CILT Panel discussion Ottawa

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AI Opportunities

1. Predictive Maintenance:

 AI can analyze data from ship sensors to predict equipment failures, reducing downtime and maintenance costs.

2. Route Optimization:

 Al algorithms can optimize shipping routes for fuel efficiency and reduced travel time, taking into account weather conditions and sea traffic.

3. Autonomous Vessels:

 Development of autonomous ships can reduce labor costs and human error, and improve safety.

4. Supply Chain Efficiency:

 AI can enhance supply chain management through better demand forecasting, inventory management, and process automation.

5. Enhanced Safety:

 Al systems can monitor for safety hazards and provide real-time alerts to prevent accidents at sea.

6. Environmental Impact:

 AI can help optimize fuel usage and reduce emissions, contributing to more sustainable shipping practices.

Challenges:

- **1.** Data Quality and Integration:
 - Integrating diverse data from various sources and ensuring its quality can be complex and resourceintensive.
- 2. Cybersecurity:
 - Increased reliance on AI and digital systems makes maritime operations more vulnerable to cyberattacks.

3. Regulatory Compliance:

Navigating international regulations and standards for AI deployment in maritime operations can be challenging.

4. High Initial Costs:

• The initial investment for AI technology and infrastructure can be significant.

5. Skill Shortages:

• There is a need for specialized skills to develop, implement, and maintain AI systems in this sector.

6. Ethical and Social Implications:

 The impact on employment and the need for policies to manage the transition to AI-driven operations need to be addressed.

AI holds the potential to revolutionize maritime transportation and logistics, but it requires careful management of the associated challenges.



Al Policy Researcher

Research AI policy and ethics.

Support Al research projects.

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