MALAYSIA INDUSTRI

THE NATIONAL CRITICAL INFORMATION INFRASTRUCTURE (NCII)

The National Critical Information Infrastructure (NCII) refers to a critical system that involves electronic information assets, networks, functions, processes, facilities, and services in an information and communications technology (ICT) environment that is significant to the nation and whose disruption or destruction could affect public health and safety, individual privacy, national economics stability, and defence national economic stability, and the nation's image.

THE NCII SECTORS ARE:

1. Government
2. Banking and finance
3. Transportation
4. Defence and national security
5. Information, communication and digital
6. Healthcare services
7. Water, sewerage and waste management
8. Energy
9. Agriculture and plantation
10. Trade, industry and economy
11. Science, technology and innovation

GOVERNMENT

- RSA – Encryption for secure communication
- ECC – Encryption for secure communication
- Machine Learning – Fraud detection, automation of public services

BANKING AND FINANCE

- AES - Data encryption
- Hidden Markov Model – Fraud detection
- Monte Carlo Simulation – Risk assessment

TRANSPORTATION

- Dijkstra's Algorithm – Route optimization
- A Algorithm – Navigation Systems
- Kalman Filters – Vehicle tracking, GPS accuracy

DEFENCE AND NATIONAL SECURITY

- Blum-Blum-Shub - Pseudorandom number generator for cryptography
- Deep Learning – Image recognition in surveillance systems
- Quantum Cryptography – For secure military communication

INFORMATION, COMMUNICATION AND DIGITAL

- SHA-256 – Cryptographic hashing for data integrity
- PageRank – Search engine ranking by Google
- Huffman Coding – Data compression in communication systems

HEALTHCARE SERVICES

- Neural Networks – Disease prediction and diagnosis
- K-Means Clustering – Patient segmentation for personalized treatment
- EMR Encryption Algorithm- Protecting patient data

WATER, SEWERAGE AND WASTE MANAGEMENT

- Genetic Algorithm – Optimizing resource allocation in water treatment
- SCADA – Supervisory control for water distribution systems

ENERGY

- Linear Programming – Energy grid optimization
- Reinforcement Learning – Smart grid energy distribution
- Fourier Transform- Signal processing in power networks

AGRICULTURE AND PLANTATION

- KNN – Crop yield prediction
- CNN – Satellite image analysis for soil health monitoring
- IoT Algoorithms – Smart farming automation

TRADE, INDUSTRY AND ECONOMY

- Apriori Algorithm – Market basket analysis in retail trade
- Bayesian Network – Stock market forecasting
- Blockchain – Secure supply chain management

SCIENCE, TS\ECHNOLOGY, AND INNOVATION

- Evolutionary Algorithm – Optimization in scientific research
- TensoFlow – AI and ML research for innovation
- Graph Theory Algorithm – Networking and cybersecurity research

THANK YOU