

Artificial Intelligence for Critical Infrastructure Protection

H2020 FINSEC Project

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AI's Potential in Critical Infrastructure Protection

Potential Benefits of AI in CIP

- Automation and Speed
- Discovery of Hidden Patterns of Security and Resilience (i.e. Beyond Known Domain Knowledge of Security Operators)

Use Cases

- Intelligent Access Control
- Intelligent Perimeter Protection
- Predictive Maintenance
- Cyber-Physical Threat Intelligence
- Safe Production

AI Challenges

Data Availability for Training Algorithms (Machine Learning, Deep Learning etc.)

- Difficult to Generate & Access
- Lack of Historic Data

Transparency & Acceptability (e.g., Explainable AI (XAI) as solution?)

- Guidelines of the High Level Expert Group (HLEG) of the EC

Digital Transformation of CIP Processes towards use of AI

- Cultural Shift – Change in Roles & Responsibilities

AI & Predictive Analytics in FINSEC

Scope & Main Goals

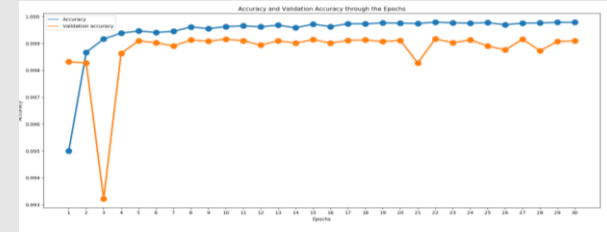
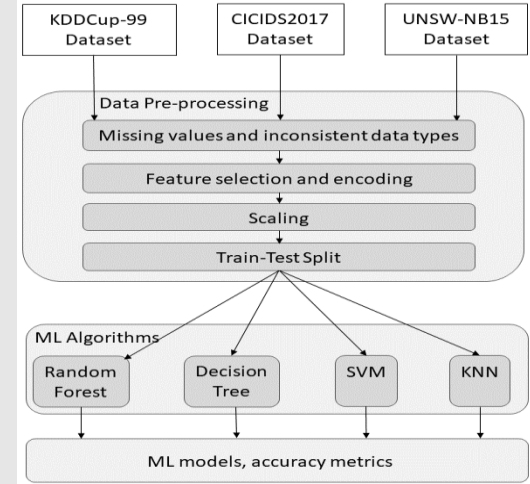
- Cyber-Physical Threat Intelligence
- Early Preparedness of Security Teams (“Predictive Analytics”)

ML Algorithms

- Traditional ML (e.g., Random Forests)
- Deep Learning (e.g., Multi-Layer Perceptrons)

Datasets

- Open Datasets (e.g., KDDCup-99, CICIDS2017) mostly Cyber Security Related
- Proprietary Datasets from the FINSEC Pilot Sites (Cyber/Physical)



For More Information:

Please Register with: [Finsecurity.eu](https://finsecurity.eu)

Thank you –Questions?