Innovation in Healthcare: Power of Artificial Intelligence

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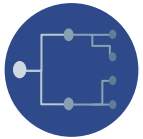


Microcontrollers

Hardware - Software

New Services

Compact and power-efficient devices

Deep Reinforcement Learning

New Studies

ML Deployment and Embedded Hardware

Model Size Reduction and Frameworks

04. Potential of ML

CLOUD

Cloud processing

AUTONOMOUS

Collect, process and extract result

LOW-COST

Ultra-low-powered and relatively small devices

05. ML in Healthcare

COVID-19

Accurate and rapidly diagnosis system

HOME HEALTHCARE

Patients and Caregivers assistant

HEARING AID

Neural speech enhancement

FRAMEWORK

A system to address e-Health sectors

COVID-19 diagnosis from routine blood tests using artificial intelligence techniques

Importance of Fast and Accurate COVID-19 Diagnosis

A reliable and automated system for diagnosing positive cases.

Performance Evaluation of Proposed Models

First dataset:
92.11% Accuracy, 92.20% AUC

Second dataset:
93.16% Accuracy, 93.20% AUC

Third dataset:
92.50% Accuracy, 92.20% AUC

Machine Learning and Deep Learning Models for COVID-19 Diagnosis

Utilizing eleven AI models using three routine laboratory blood test datasets.

Utilizing Interpretable Artificial Intelligence for COVID-19 Diagnosis

SHAP, LIME, ELI5

06. Challenges

GPU

Processing

Energy Constraints

Energy

Different Devices

Heterogeneity

Data leakage

Security

07. Conclusion

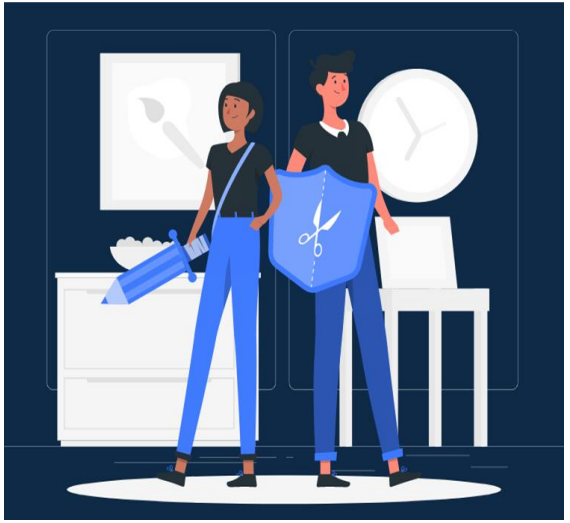
ML Revolution

Optimization

New services and devices

Healthcare advances

Do you have any questions?



THANKS!