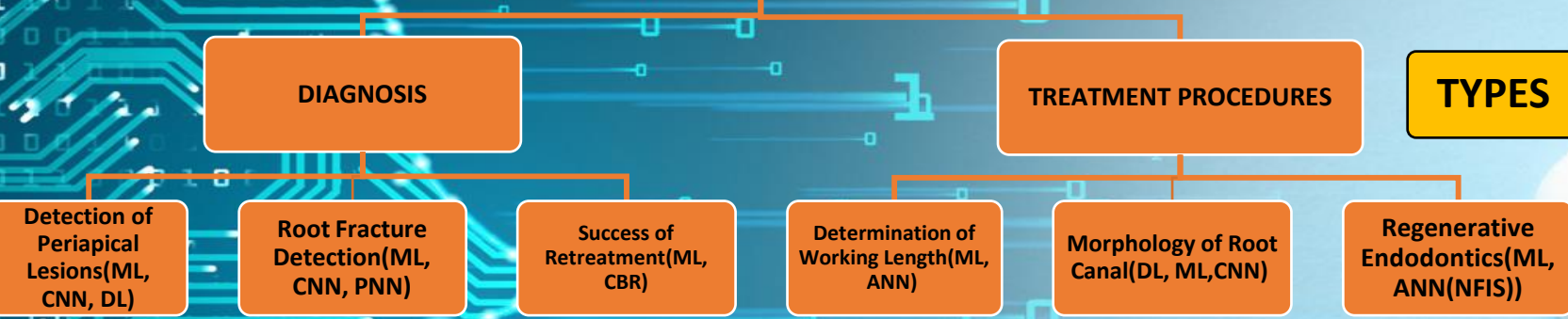# ARTIFICIAL INTELLIGENCE (AI) : A BOON IN ENDODONTICS

Described as 4th industrial Revolution which uses computer technology to simulate intelligent behavior, critical thinking & decision making similar to humans. Given by JOHN MCCARTHY In 1956.
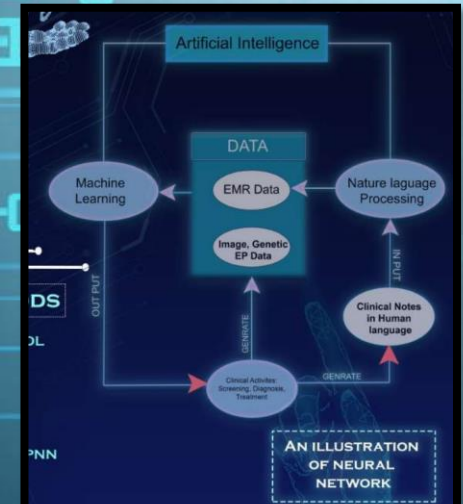
USES

DIAGNOSIS

- Detection of Periapical Lesions(ML, CNN, DL)
- Root Fracture Detection(ML, CNN, PNN)
- Success of Retreatment(ML, CBR)

TREATMENT PROCEDURES

- Determination of Working Length(ML, ANN)
- Morphology of Root Canal(DL, ML,CNN)
- Regenerative Endodontics(ML, ANN(NFIS))

TYPES
- VIRTUAL
- PHYSICAL

FUTRUE OF AI
DEXVOICE
MMG CHAIR FILL
DENTRIX DETECT
PANDA P3

DIGITAL APPLICATIONS

- ➤ DIGITAL RADIOGRAPHY
- ➤ CBCT
- ➤ COMPUTER AIDED DIAGNOSIS
- ➤ GUIDED ENDODONTICS
- ➤ 3D PRINTING
- ➤ RESTORATION OF RC TREATED TEETH WITH CAD-CAM

AN ILLUSTRATION OF NEURAL NETWORK

Advantages of Artificial Intelligence
01 Error Reduction
02 Difficult Exploration
03 Daily Application
04 Digital Assistants
05 No breaks
06 Increase Work Efficiency
07 Reduce cost of training and operation