

Artificial Intelligence in Education

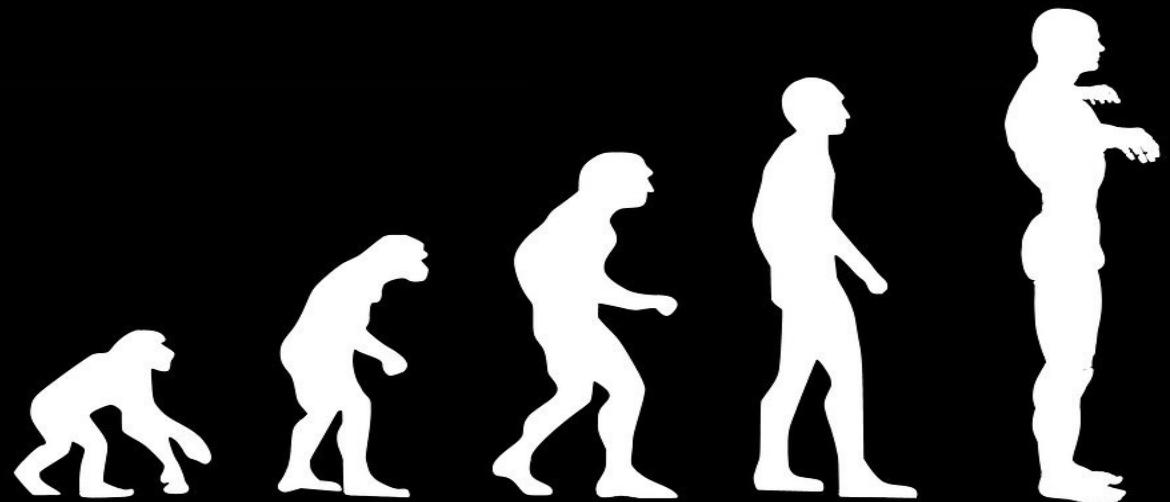


Thivagu



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AI ?



Definitions of AI, which differentiates computer systems on the basis of rationality and thinking vs. acting:

Ideal Approach:

Systems that think rationally



Human Approach:

Systems that think like humans

Systems that act rationally



Systems that act like humans

AI Applications



3 Types of Artificial Intelligence

Types of AI

Artificial Narrow Intelligence (ANI)



Stage-1

Machine Learning

- ▶ Specialises in one area and solves one problem



Siri

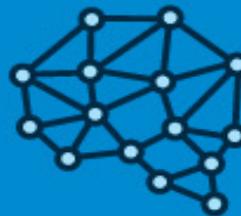


Alexa



Cortana

Artificial General Intelligence (AGI)



Stage-2

Machine Intelligence

- ▶ Refers to a computer that is as smart as a human across the board

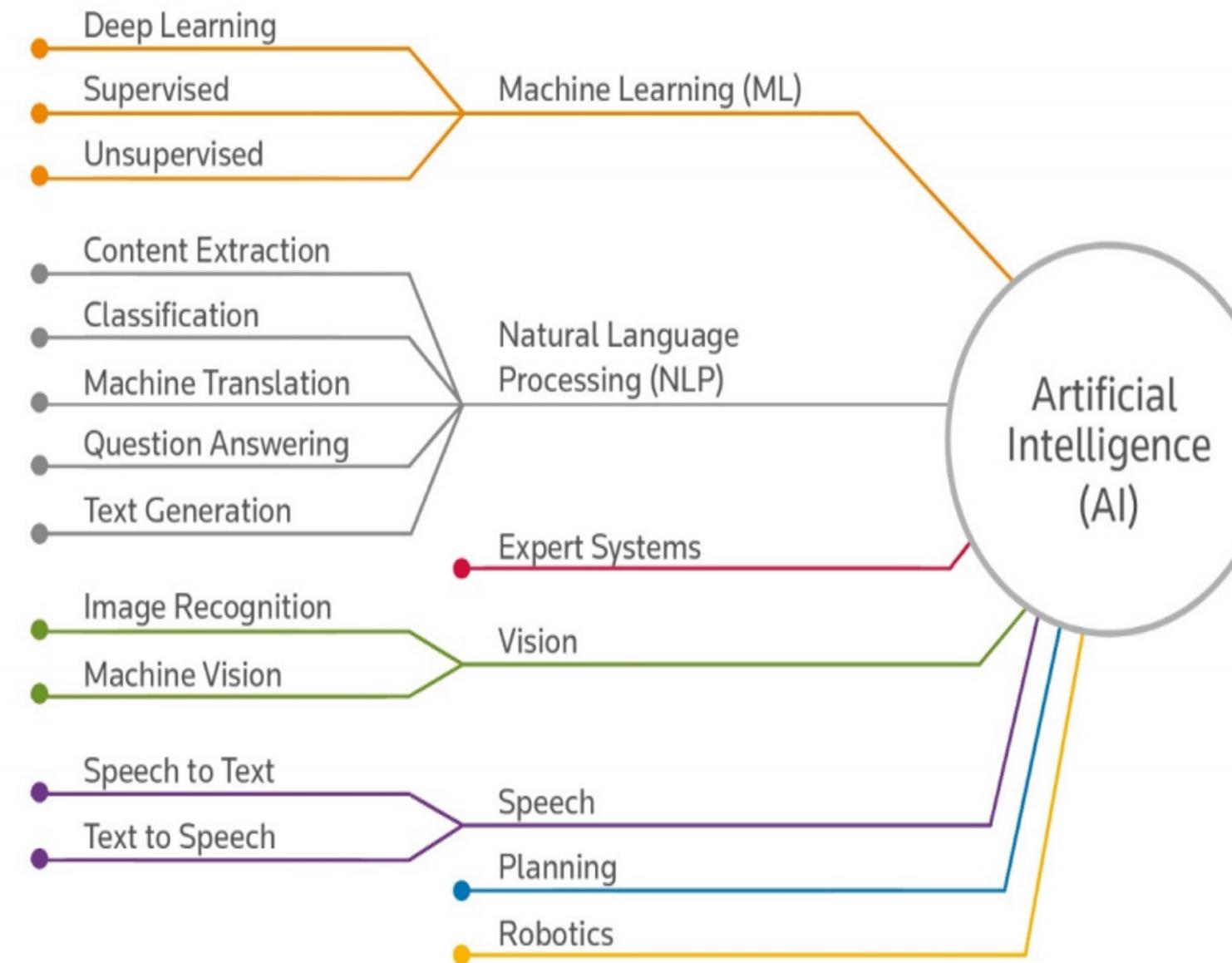
Artificial Super Intelligence (ASI)



Stage-3

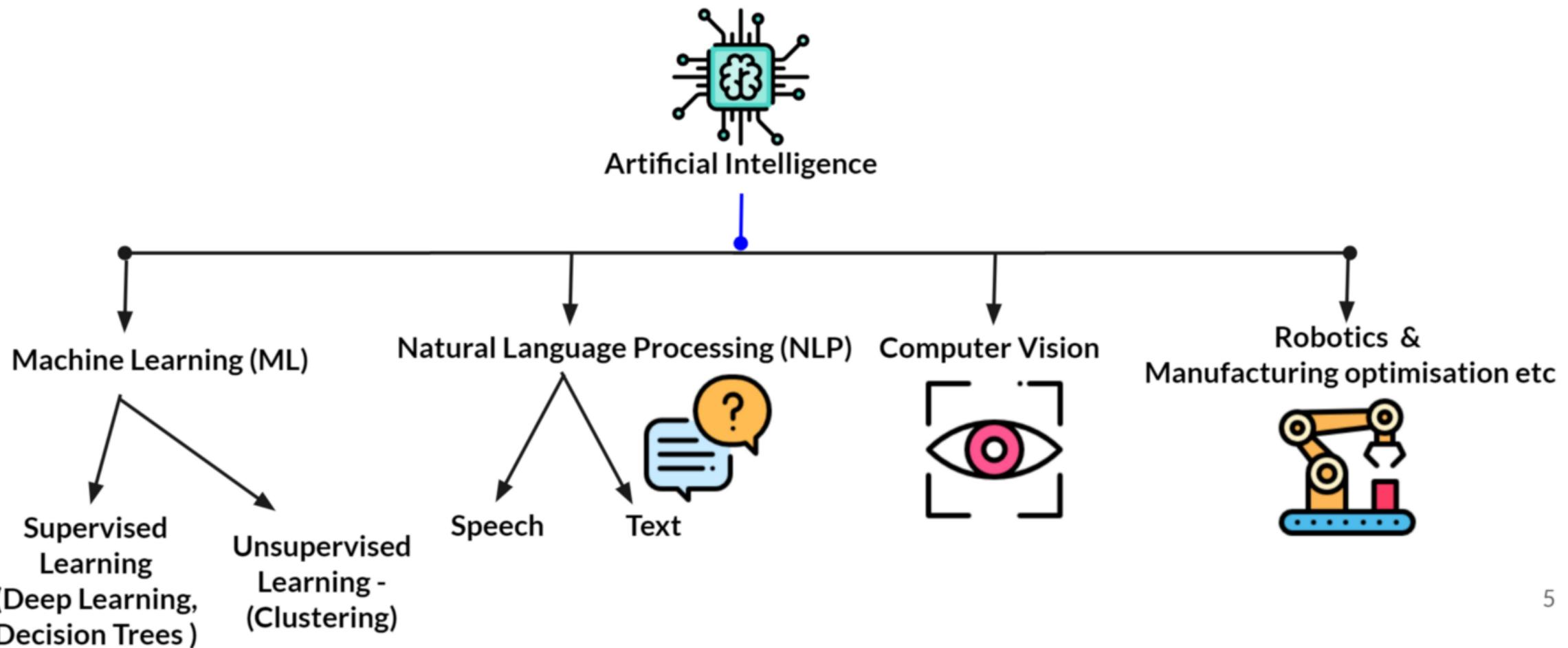
Machine Consciousness

- ▶ An intellect that is much smarter than the best human brains in practically every field



The Potential Benefits of AI in Education





AI Language Learning

Personalized Language Materials and Resources

Examples: Duolingo, Memrise, Italki



AI Writing Assistants

Examples: Grammarly, Essaybot, Quillbot, AI Writer, Textio, etc

AI Chatbots

Examples: Mike, Elbot, Cleverbot, JohnLennon, Zabaware, and so on.

AI Language Learning Software

Examples: Duolingo, Busuu, Speexx, Babbel, Memrise, and so on.

APPLICATION OF AI IN EDUCATION

AI in Education

Smart Content

With the help of AI, the textbooks could be split into small chunks of digestible guides, which is easy to read and understand.



Personalized Learning

AI in education can adapt quickly to individual needs and deliver personalized learning methodologies and activities driven by the learners' interests.



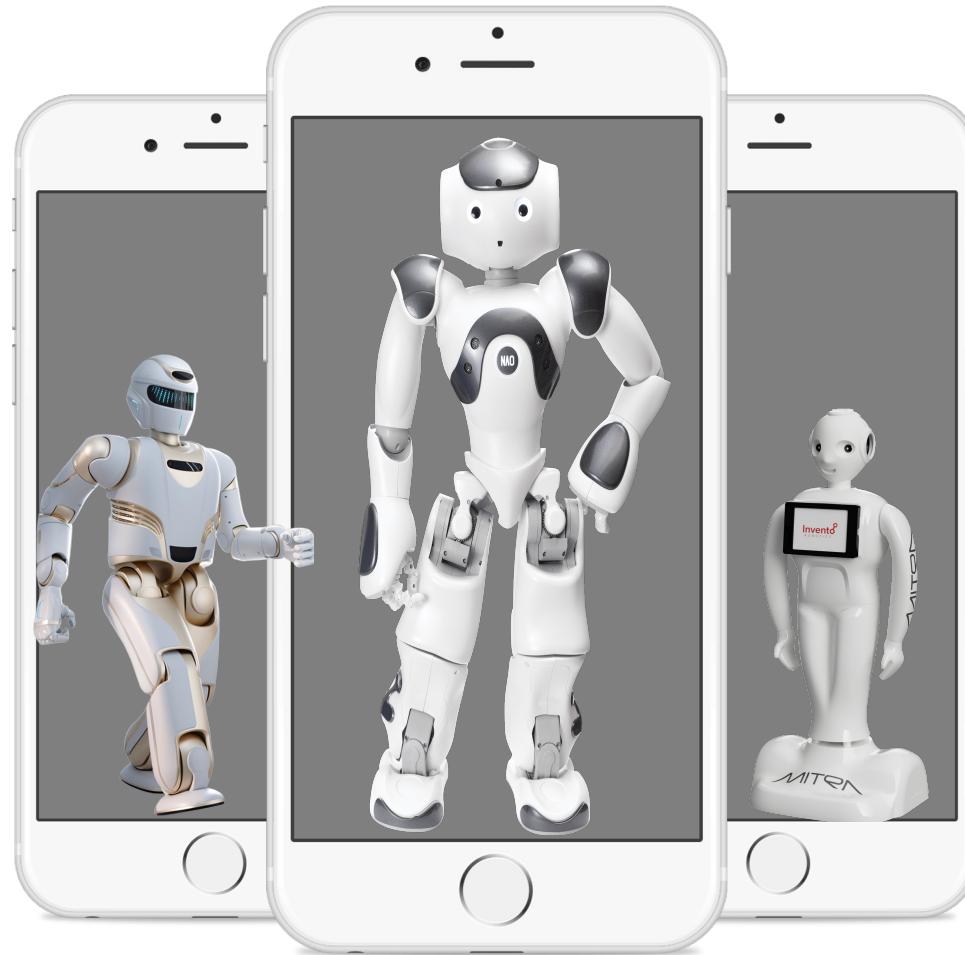
Adaptive Learning

Tracking their academic progress, modify the course or its learning pace



Data Accumulation

Using previous search queries, AI in education can suggest related content for the students.



Virtual Facilitator

Virtual Facilitator can think, act, and react to the students' queries and act as an assistant for the teacher.



Automated Grader

Robo-graders replace a part of the grading system, and human grader is always there for further assessment.



Chat Campus / Chatbot

The chatbot collects the students' opinion through a dialogue interface as if it is a real interviewer and look for reasons too for varied opinions.



Proctoring

AI-powered systems ensure the authenticity of the student to take the exam and prevent from cheating.



Uses of AI in Education that include:

Classroom/ Behaviour Management

01

Realtime Monitoring, Parent Communication, Personalised Feedback, Face recognition, Emotion recognition, Voice Analysis

Eg: ClassDojo, SkedPal, Teachmint

Gamified Learning - Engagement

02

NLP, Intelligent Tutoring, Automated Content Generation, Intelligent Game Design

Eg: Blooket, Quizalise, Quizizz

Staff Scheduling & Management

03

Automated Scheduling, Skill Matching, Real-Time Updates, Workload Balancing, Compliance Monitoring, Integration with HR System

Assessment

04

Automated Scoring, Adaptive Testing, Behavioral and Facial Analysis, Bias Detection, Plagiarism Detection

Eg: Papershala

Transportation Maintenance

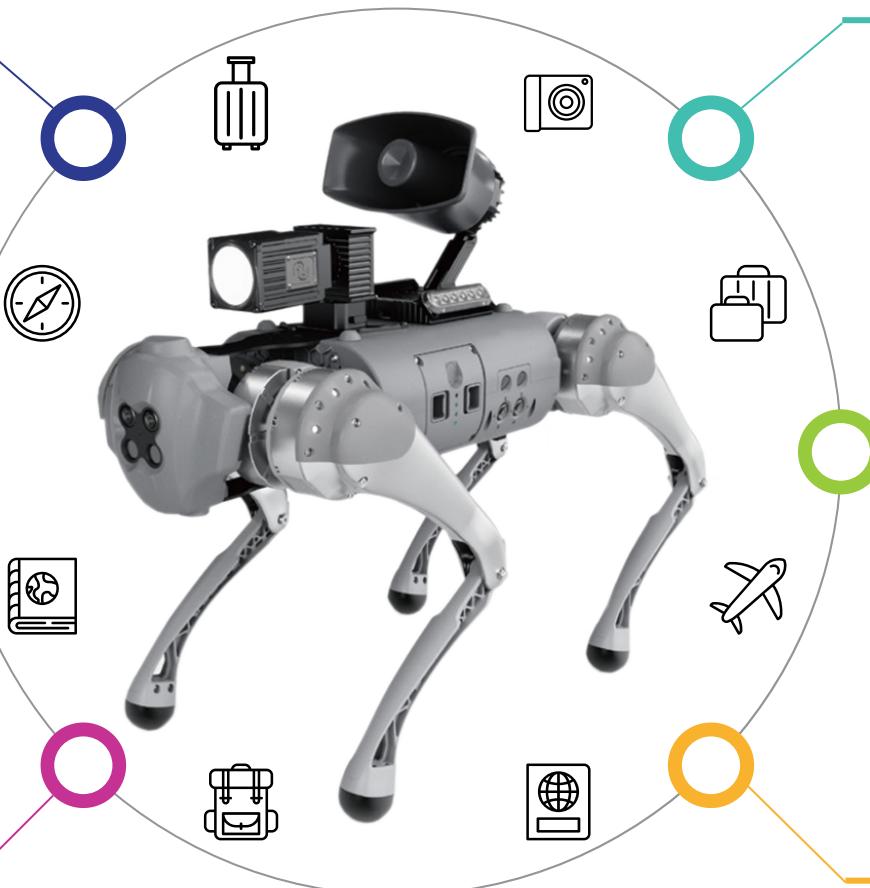
05

Predictive Maintenance, Automated Tasks, Decision Support, Remote Monitoring, IoT and Sensors,

Cyber Safety & Security Management

06

Threat Detection, Anomaly Detection, Vulnerability Management, Security Analytics and Reporting



Artificial Intelligence in Higher Education

Plagiarism Detection

Plagiarism detection in AI is the process of identifying and detecting plagiarism in AI-generated content.



Learning Management System

Personalised Learning, Automated Assessment, Intelligent Reporting, NLP, Sentiment Analysis, Learning Analytics, Predictive Analysis



Exam Integrity

Facial Recognition, Proctoring, Content Monitoring, Biometrics, Data Analytics.



Academic Research

Automated Literature Reviews, NLP, Machine Learning, Text generation, Computer Vision, Explainable AI, Ethical AI.



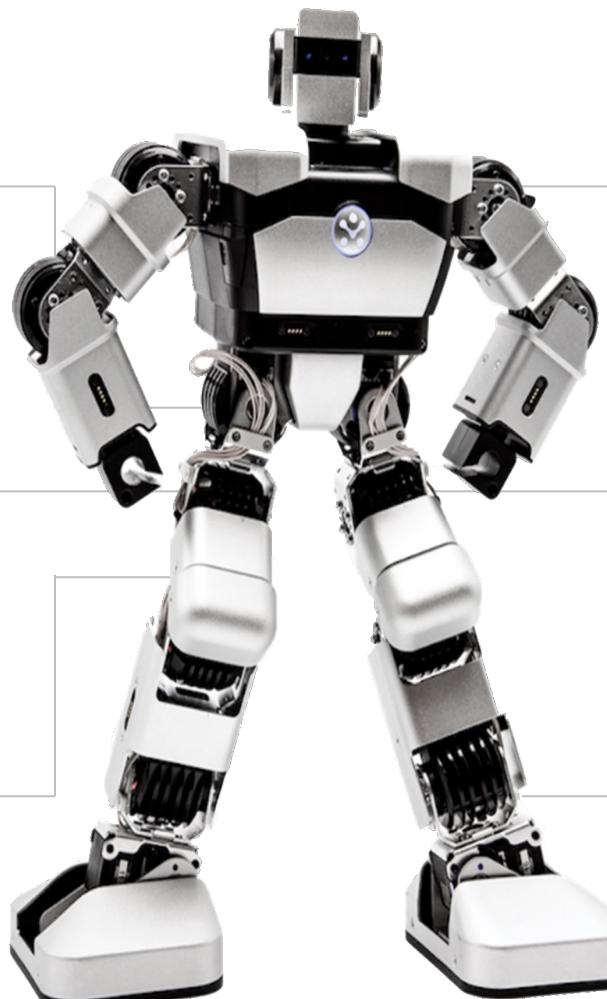
Chatbots for Enrollment and Retention

Providing information, Students stay on track, Personalised Guidance, Application Assistance, Notification, Reminder, Virtual Campus tours

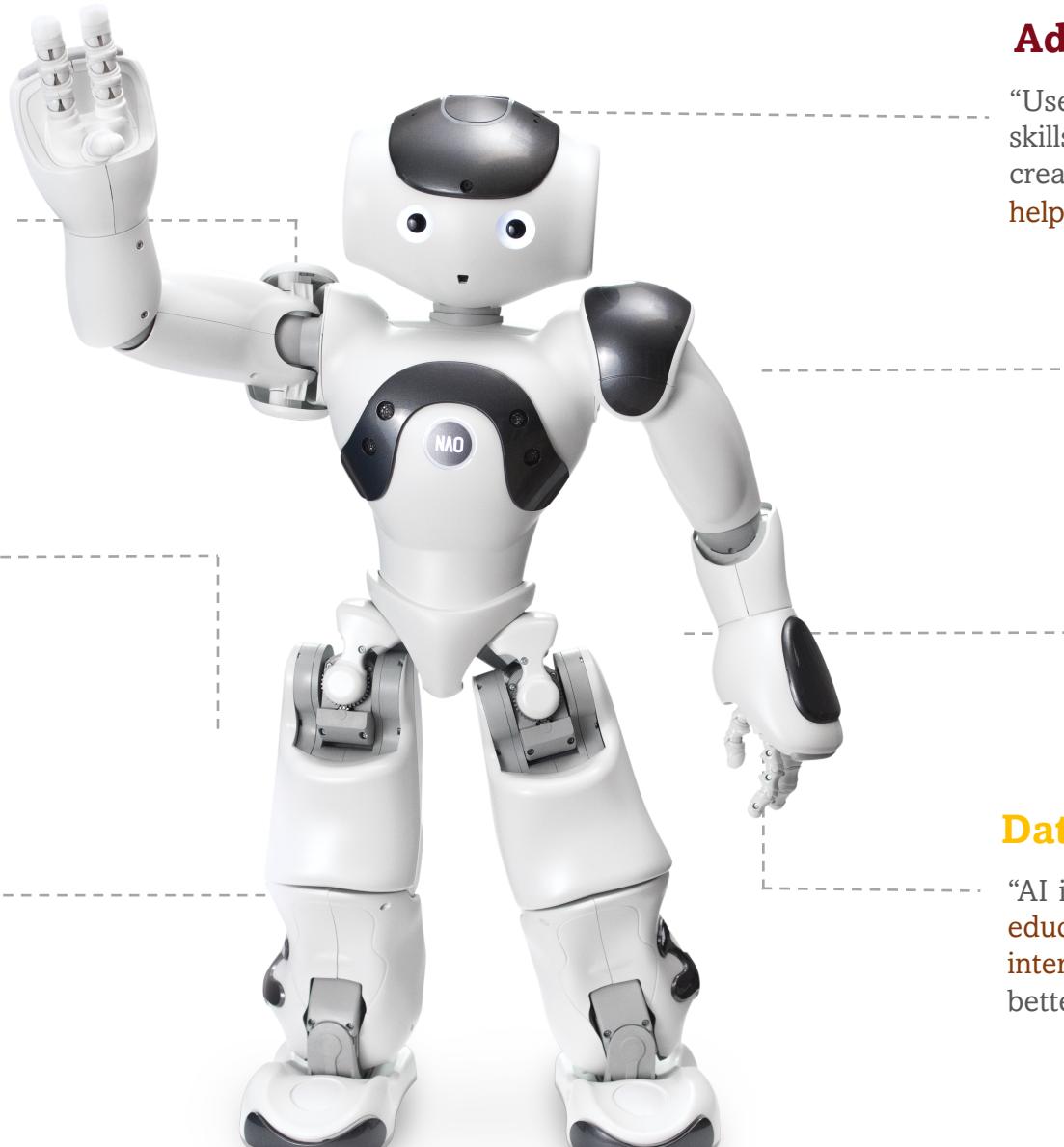


Analyzing students success metrics

Track Progress, Behavioral Analytics, Social Network Analysis, Adaptive Testing,



Artificial Intelligence in Higher Education



Scheduling

Helping administrators to schedule courses and individuals to manage their daily, weekly, monthly or yearly schedules.

Facilities Management

AI is effective at “monitoring the status of power, Wi-Fi and water services; alerting the facilities management workers when problems arise.”

Overall Institution Management

AI is currently being used to manage entire schools, powering student records systems, transportation, IT, maintenance, scheduling, budgeting, etc.

Adaptive Learning

“Used to teach students basic and advanced skills by assessing their present skill level and creating a guided instructional experience that helps them become proficient.”

Assistive Technology

AI can help special needs students access a more equitable education, for example by “reading passages to a visually impaired student.”

Interactive Games

“AI is currently being used to power interactive games that teach children basic academic skills and more.”

Data & Learning Analytics

“AI is currently being used by teachers and education administrators to analyze and interpret data,” enabling them to make better-informed decisions.

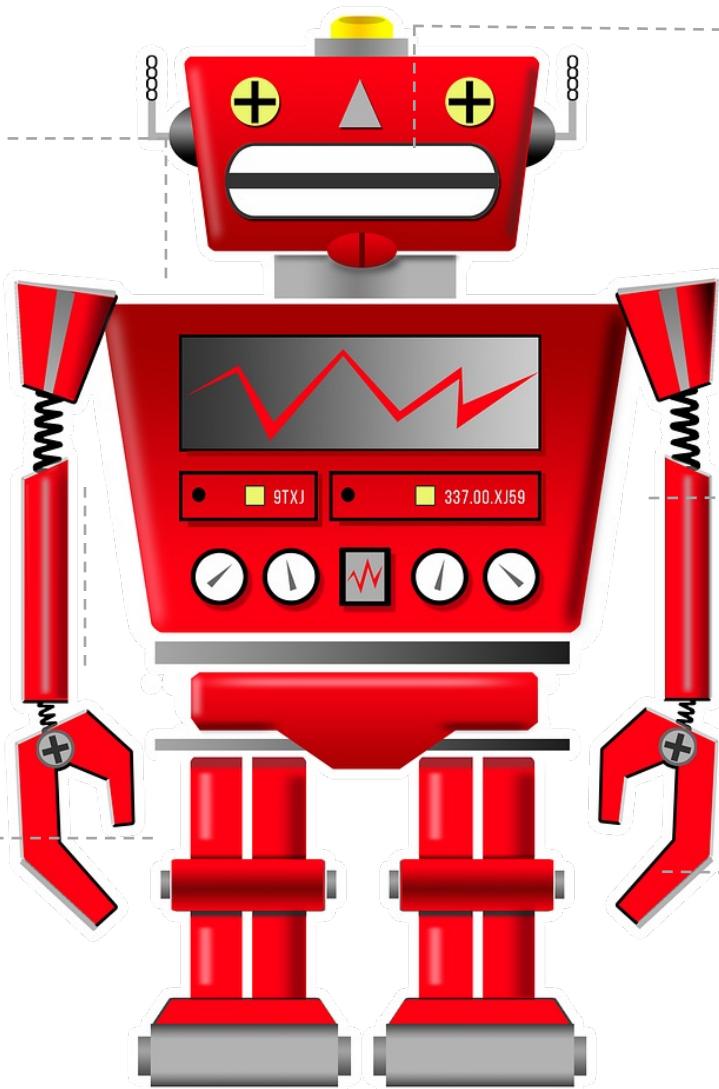
Artificial Intelligence in Health Care

Language Learning Model

Used clinical decision-making. It will assess medical reports and give guidance on treatment.,

AI Camera

The camera will scan a patient in multiple angles.



Urologiq

To detect the exact size, and location of kidney stones

CAD

Computer-aided devices to detect cancer in the body.

Bone labelling AI tool

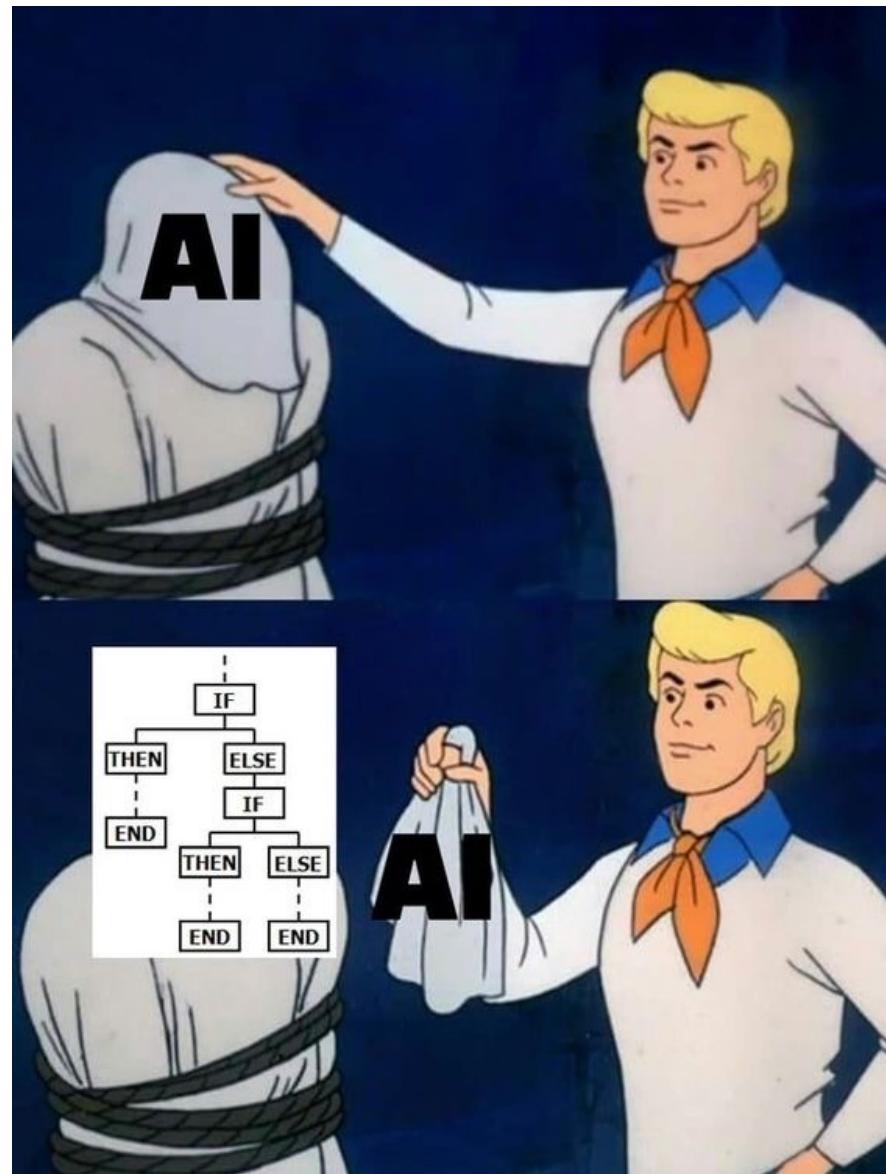
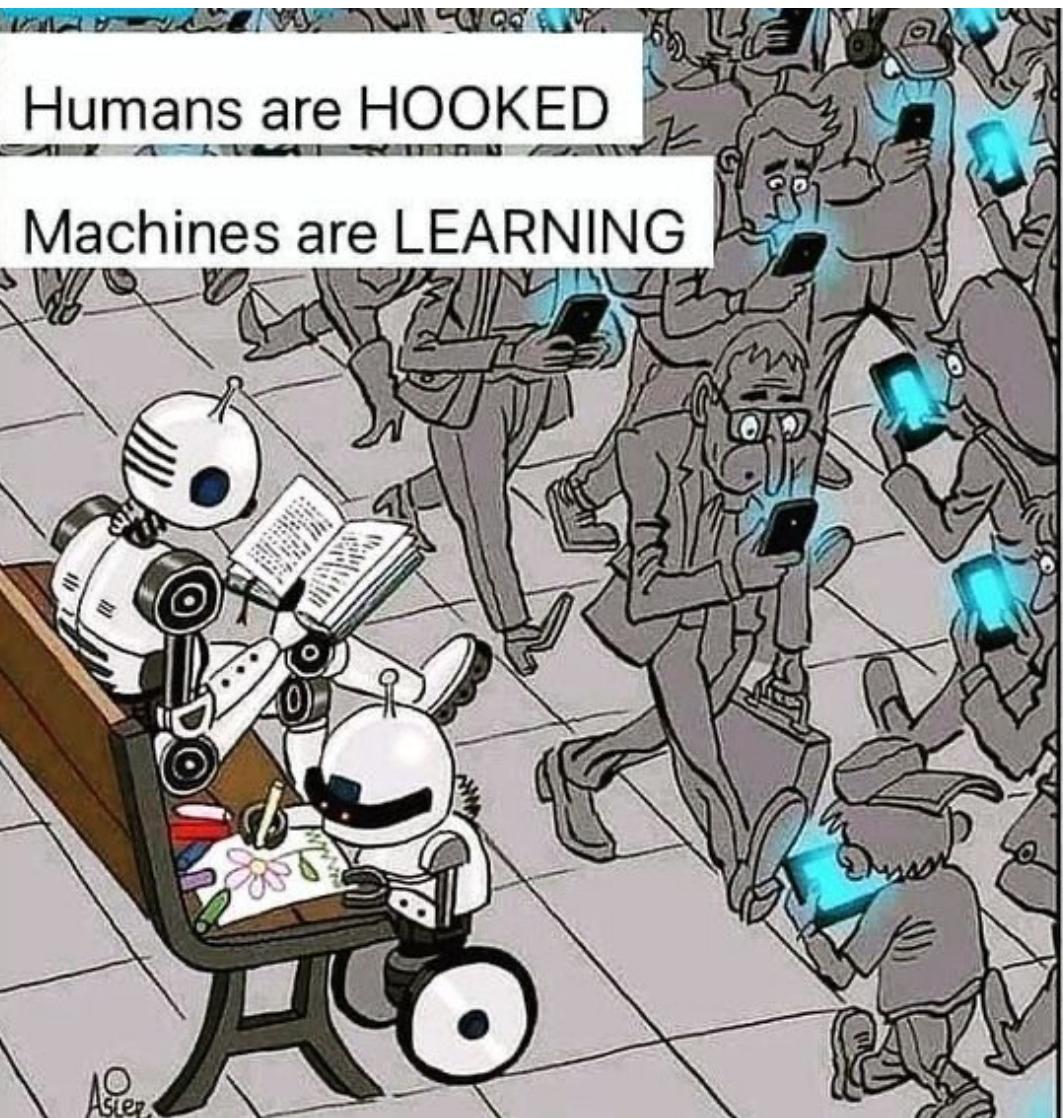
Will label exact rip or bone in case of multi-bone fractures

Humans are
HOOKED



Machines are
LEARNING





Thank You

