**NATIONAL UNIVERSITY OF SAN MARCOS**

**University of Peru, Dean of America**

**FACULTY OF SYSTEMS ENGINEERING AND COMPUTER SCIENCE**

**PROFESSIONAL SCHOOL OF SYSTEMS ENGINEERING**

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**COURSE:**

Artificial intelligence

**THEME:**

Week 1 Report

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**Introduction to Artificial Intelligence**

There is no one definition accepted by all experts of **what artificial intelligence means.** First, because it is a new, changing, and experimental science. And second, because we can't even define exactly what human intelligence is.

In its simplest form, **AI is the attempt to mimic human intelligence using a robot, or software.** But it's a very vague concept because there are so many ramifications. Stuart Russell and Peter Norvig differentiated **four types in 2009.**

These were systems that think like humans, such as artificial neural networks. Systems that act like humans, like robots. Systems that use rational logic, such as expert systems, and systems that act rationally, such as intelligent agents.

Although it is a concept that has become fashionable in recent years, artificial intelligence is not something new. 2,300 years ago, Aristotle was already trying to turn the mechanics of human thought into rules, and since the time of Leonardo Da Vinci the sages have tried to build machines that behave like humans.

In 1769 an automaton called The Turk, built by the Austrian engineer Wolfgang von Kempelen, visited all European courts challenging chess to anyone who dared to play against it. He played against Napoleon, against Benjamin Franklin, against chess masters, and beat them.

**Different types ofAI'swidely used**

1. **Expert system**

It is an AI that tries to emulate a human expert in a certain subject.

From a technical service worker to a receptionist, a cinephile or an economist.

1. **Machine Learning**

Machine learning fits perfectly with the theoretical explanation we have given. It is the ability of an AI, a software, or a robot to learn on its own.

Machine learning follows the classic steps of AI: first there is a learning, a training that generates an experience, and a practice that tells us whether the task is successfully accomplished.

1. **Neural networks**

What differentiates it from a computer program is that they do not follow orders but associate with each other and change their inputs and outputs through learning and error, according to the taskentrusted.

Neural networks are suitable for tasks in which a pattern has to be recognized, or ideas associated. They are used in things as disparate as robot control, text and image recognition, natural language processing, etc.

1. **Deep Learning**

Deep learning is a type of machine learning that goes a little further, with the goal of encompassing more and processing more data at the same time.

Deep learning uses neural networks to learn using increasingly abstract layers of information, as we humans do. If you must look for hands in a photo, for example, start with simple information, such as separating according to shape, to differentiate it from a foot.