

**Informatics College Pokhara**



**Artificial Intelligence -CU6051NI**

# Individual Coursework-1

**Submitted** **To**:

Mr. Abhinav Dahal

Module leader

Artificial Intelligence

**Submitted** **By**:

Name: Milan Tilija

London Met ID: 20048683

Group: C2

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# Introduction

With good reason, AI is presently one of the most popular terms in technology. Over the past several years, several advancements and innovations previously only seen in science fiction have progressively become realities. Artificial intelligence (AI) and digitalization are changing how we work, live, communicate, learn, and play. We, humans, are increasingly using enhanced technologies like AI in our daily lives which may also have a substantial impact on our lives. AI is revolutionizing all aspects of human existence. The first AI thought to be a checker-playing computer was developed in 1951 by Christopher Strachey, Oxford University UK. (Copeland, 2022).

Artificial intelligence (AI) is the simulation of human intelligence in machines that are programmed to perform tasks commonly associated with intelligent beings and mimic their actions. (FRANKENFIELD, 2022). For instance, Siri is one of the most famous inventions in the technology world. Siri is a voice recognition that can understand natural human language and performs a task like answering a question, reading messages, searching on the internet, and many more which reduce time and complexity. Machine learning is one of the subsets of artificial intelligence which can automatically learn from and adapt to new data without being assisted by humans. The ideal characteristic of AI is to the ability to justify and take actions to achieve the specific targeted goals.



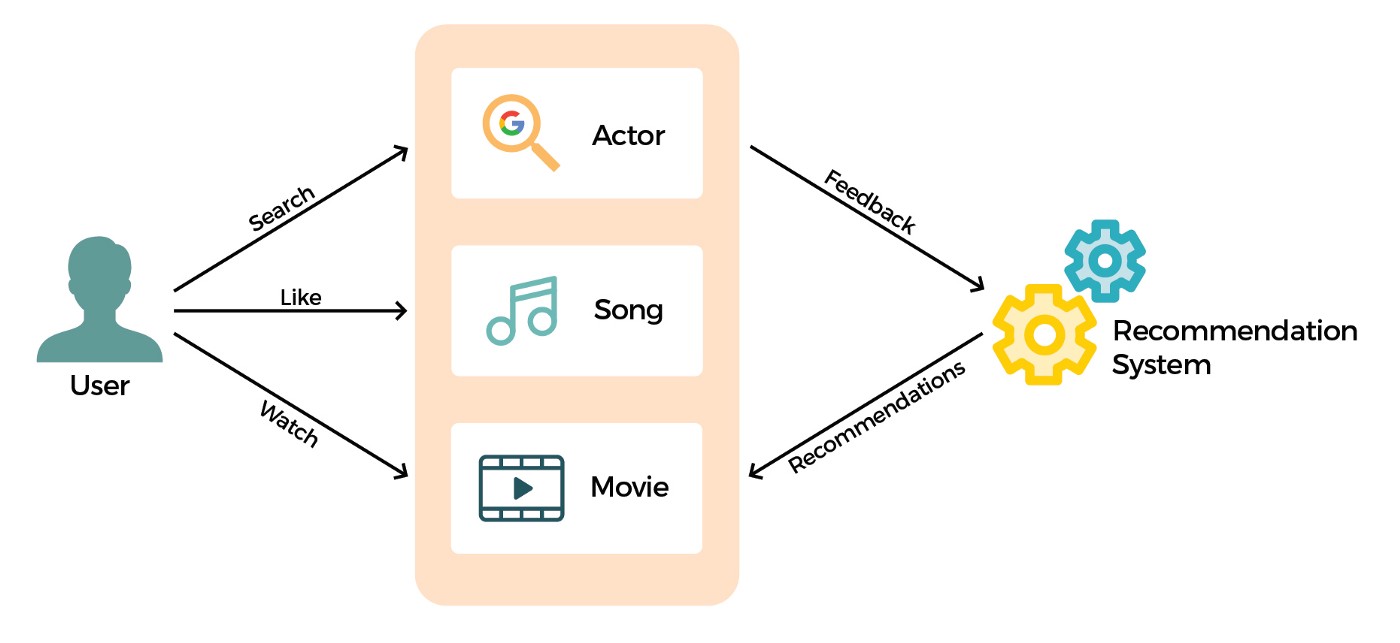
**Figure 1 Artificial Intelligence**

Nowadays AI has been used in different industries from finance to healthcare. AI inventions are just begun and those technologies are being tested in various fields. Some of the most renowned applications of AI are in the healthcare industry for dosing drugs and doling out different treatments tailored to specific patients. Auto-playing chess and autopilot like Tesla have become one of famous technologies invented. Artificial intelligence has applications in the finance industry, which helps banking and finance to regulate the economic flow of money. (FRANKENFIELD, 2022)

Artificial intelligence is categorized into two parts which is weak AI and strong AI. Weak AI is also known as narrow artificial intelligence which describe that it is limited to a specific or narrow area. It can simulate human cognition like learning, perception, reasoning, problem solving and other activities that a human can perform. By making predictions and detecting patterns weak AI helps in converting big data into usable information. Facebook newsfeed, Amazon’s suggested purchase and Apple’s Siri, that response user’s commands are some of the example of weak AI. (Frankenfield, 2022). Strong and super AI is only the theoretical AI at this point. When a machine will have full cognitive abilities, doesn’t required human for instructing machine, and machines act, feel, respond and think like humans. (Marr, 2021).

AI can significantly reduce errors and increase, accuracy and precision based on information gathered and a certain set of algorithms. AI is available anytime as it doesn’t feel tired, weak, or stressed. The productivity of products and profit of the company can be boosted by AI certain inventions like recommendation systems, and chatbots for a frequent response. More and more national arrangements are centering on AI, which is being consolidated into and affecting mechanical and agricultural forms, administrations, esteem chains, and the organization of work environments. AI has the potential to improve people’s lives, but it too raises several important approaches, moral and social issues, counting job creation and work out-of-date quality. It speaks to a source of social and political pressure, and dangers exacerbating inequalities inside and over nations. (Duggal, 2022).

This project is all about conducting research on one particular AI issue among several AI topics. Recommendation systems, a highly popular and frequently used AI concept, are studied in this study. For developing recommendation systems, there are several approaches and algorithms. Collaborative filtering, one of the most widely used algorithms. In this algorithm, similarities between users and specific items are used to recommend products and items to another person. Today, recommendation systems are utilized extensively on streaming websites like Netflix and YouTube as well as commerce sites like Amazon, Daraz, others.



**Figure 2: Recommendation system.**

## Explanation of the topic

## Explanation of the chosen problem domain

# Background

## Research works

## 2.2 Review and Analysis of existing work in the problem domain