**Faculty of engineering - Shoubra**
**Benha University**
# Research Article / Research Project / Literature Review

in fulfillment of the requirements of

| Department | Engineering Mathematics and Physics |
|---|---|
| Division | ----------------- |
| Academic Year | 2019-2020 Preparatory |
| Course name | computer |
| Course code | ECE001 |

## Title: -

## Build a website on recent computer engineering topics

## by

| Name | Edu mail | B.N | Tobic |
|---|---|---|---|
| أحمد عقل أبوالعز \ Ahmed Akl AboElazz | ahmed195101@feng.bu.edu.eg | 98 | Artificial Intelligence |

## Examiners committee

| 1 | Dr.Ahmed Bayoumi |
|---|---|
| 2 | Dr.Shady Elmashad |
| 3 | Dr. Abdelhamid Attaby |

**Github link :** [https://github.com/ahmedakl045/ECE001-ahmedakl.githup.io](https://github.com/ahmedakl045/ECE001-ahmedakl.githup.io)

**Github page :** [https://ahmedakl045.github.io/ECE001-ahmedakl.githup.io/](https://ahmedakl045.github.io/ECE001-ahmedakl.githup.io/)

## Application brief :

Artificial Intelligence is one of the new developments of systems that aim to mimic human reasoning. Scientists have made huge strides in weak AI systems, while in strong AI systems they have made just a modest mark. Some of us have at some point in our lives used Siri, Google Assistant, Cortana or even Bixby. What is it? They are our personal Digital Assistants. They help us find useful information when we ask with our voice; we can say 'Hey Siri, show me the nearest fast food restaurant' or 'Who is the twenty-first US President? 'And the assistant will respond with the correct Data through either your phone or a web search. This is simple Artificial Intelligence proof! Let's read some more! Artificial Intelligence is the ability to understand and analyze on a computer program.

In the year 1950 John McCarthy coined the word Artificial Intelligence. He said, 'Every aspect of learning or any other feature of intelligence can in principle be so precisely described that a machine can be made to simulate it. An attempt will be made to find how to make machines use language, form abstractions, and concepts, solve kinds of problems now reserved for humans, and improve themselves.

# Screenshots :

## Artificial Intelligence main page

### links

- Main page
- What is Artificial Intelligence?
- How artificial intelligence will change the world in future?
- Applications on Artificial Intelligence
- The dangers of Artificial Intelligence

Artificial intelligence is a branch of computer science that attempts to understand the essence of intelligence and produce a new intelligent machine that responds in a manner similar to human intelligence. Research in this area includes robotics, speech recognition, image recognition, Natural language processing and expert systems Theory and technology have become more and more advanced since the advent of artificial intelligence, and the areas of application have grown. It is possible that in the future the technical goods carried with them by artificial intelligence will be the "shell" of human information. Artificial intelligence can simulate human consciousness and thinking about the information process Artificial intelligence is not human intelligence, but it can be as human intellect, and it can surpass the intelligence of man. Often referred to as "powerful AI,"[196]" complete AI"[197] or the ability of a computer to perform "general intelligent action." Academic sources reserve "solid AI" for reference to devices that can experience consciousness.

### History of Artificial Intelligence

Artificial Intelligence ( AI) history started in the antiquity, with myths , stories and rumors of artificial beings created by master craftsmen with intellect or consciousness. Classical philosophers planted the seeds of modern AI, who sought to explain the mechanism of human thought as the computational manipulation of symbols. This research resulted in the 1940s invention of the programmable digital computer, a system based on the mathematical reasoning's abstract nature. This system and the concepts behind it motivated a group of scientists to start discussing the prospect of creating an artificial brain seriously.The field of AI research was developed during the summer of 1956 at a workshop held on the Dartmouth College campus.[1] Those who attended would become the pioneers in AI research for decades. Some of them believed that a computer as intelligent as a human being would exist in no more than a century and millions of dollars were given to make this dream a reality

### The birth of artificial intelligence 1952–1956

In the 1940s and 50s, a handful of scientists from a variety of fields (mathematics, psychology, engineering, economics and political science) began to discuss the possibility of creating an artificial brain. The field of artificial intelligence research was founded as an academic discipline in 1956.A confluence of ideas that became popular in the late 1930s, 1940s and early 1950s influenced the earliest work into thinking machines. Recent neurology studies has shown that the brain was an electrical neuron network that exploded in pulses of all-or-nothing. Cybernetics by Norbert Wiener described control and stability in power grids In 1950 Alan Turing published a landmark paper in which he speculated on the possibility of creating machines that think.40 He noted that his famous Turing Test was hard to define and devised thinking. If a computer was able to carry on a conversation (through a teleprinter) that was indistinguishable from a human conversation, then it was fair to assume that the computer was thinking Christopher Strachey wrote a checkers system using the University of Manchester's Ferranti Mark 1 computer in 1951, and Dietrich Prinz wrote one for the chess. The checkers system of Arthur Samuel, established in the middle 50s and early 60s, gradually gained enough expertise to challenge a respectable amateur. Game AI will continue to be used as a indicator of AI development throughout its entire existence. Marvin Minsky, John McCarthy and two senior scientists had coordinated the 1956 Dartmouth Conference: IBM's Claude Shannon and Nathan Rochester. The conference proposal contained this assertion: "Every aspect of learning or some other function of intelligence can be defined so accurately that it can be rendered to simulate a computer.The participants included Ray Solomonoff, Oliver Selfridge, Trenchard More, Arthur Samuel, Allen Newell and Herbert A. Simon, all of whom would create important programs during the first decades of AI research.[50] At the conference Newell and Simon debuted the "Logic Theorist" and McCarthy persuaded the attendees to accept "Artificial Intelligence" as the name of the field. there were development in this field until AI from 1993-2011

### AI 1993–2011

## The Definition of Artificial Intelligence page
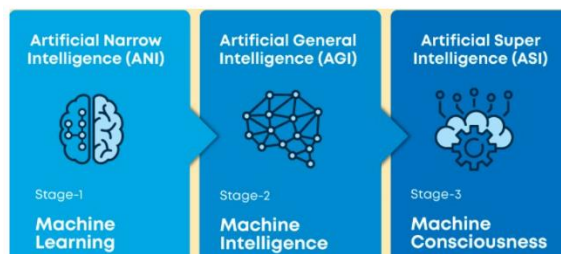
### links

- Main page
- What is Artificial Intelligence?
- How artificial intelligence will change the world in future?
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### The Definition of Artificial Intelligence

(AI)refers to the simulation of human intelligence in computers programmed to think like human beings and to mimic their actions. The word can also refer to any computer that displays human mind-related characteristics such as learning and problem-solving. Previous benchmarks that defined artificial intelligence become outdated as technology advances. For example, machines that calculate basic functions or recognize text by optimal recognition of character are no longer considered to embody artificial intelligence, as this function is now taken for granted as an inherent computer function. The first thing that most people generally think about when they hear the word artificial intelligence is robots. This is because large-budget movies and novels weave tales about human-like machines this wreak havoc on Earth. There could be nothing further from the truth, however. Artificial intelligence is based on the idea that human intelligence should be described in such a way that a computer can easily imitate it and perform tasks, from the simplest to the more complex. Artificial intelligence targets include comprehension, reasoning, and perception. Previous benchmarks that defined artificial intelligence become outdated as technology advances. For example, machines that calculate basic functions or recognize text by optimal recognition of character are no longer considered to embody artificial intelligence, as this function is now taken for granted as an inherent computer function.

### Types of Artificial Intelligence

# Artificial Intelligence in future

## links

## A table shows how artificial intelligence will change the world in future

| Industry or Usage Context (specific firm or AI application) | Description |
|---|---|
| AI in driverless cars (e.g., Tesla) | In the future, AI-enabled cars may allow for car journeys without any driver input, with the potential to significantly impact various industries (e.g., insurance, taxi services) and customer behaviors (e.g., whether they still buy cars) |
| Online retailing AI (e.g., Birchbox) | AI will enable better predictions for what customers want, which may cause firms to move away from a shopping-then-shipping business model and toward a shipping-then-shopping business model |
| Fashion-related AI (e.g., Stitch Fix) | AI applications support stylists, who curate a set of clothing items for customers. Stitch Fixâ€™s AI analyzes both numeric and image/other non-numeric data. |
| Business process AI (e.g., IBM Interact) | AI used for multiple (simple) applications, such as customized offers (e.g., Bank of Montreal). |

# Application on Artificial Intelligence

## links

## Hospitals and medicine

Artificial neural networks are used as clinical decision support systems for medical diagnosis, such as in Concept Processing technology in EMR software. Other tasks in medicine that can potentially be performed by artificial intelligence and are beginning to be developed include: Computer-aided interpretation of medical images. Such systems help scan digital images, e.g. from computed tomography, for typical appearances and to highlight conspicuous sections, such as possible diseases. A typical application is the detection of a tumor. Heart sound analysis Companion robots for the care of the elderly Mining medical records to provide more useful information. Design treatment plans. Assist in repetitive jobs including medication management. Provide consultations. Drug creation Using avatars in place of patients for clinical training Predict the likelihood of death from surgical procedures Predict HIV progression

## Education

AI tutors could allow for students to get extra, one-on-one help. They could also reduce anxiety and stress for some students, that may be caused by tutor labs or human tutors.[21] In future classrooms, ambient informatics can play a beneficial role. Ambient informatics is the idea that information is everywhere in the environment and that technologies automatically adjust to your personal preferences. Study devices could be able to create lessons, problems, and games to tailor to the specific student's needs, and give immediate feedback. But AI can also create a disadvantageous environment with revenge effects, if technology is inhibiting society from moving forward and causing negative, unintended effects on society.[23] An example of a revenge effect is that the extended use of technology may hinder students' ability to focus and stay on task instead of helping them learn and grow.Also, AI has been known to lead to the loss of both human agency and simultaneity.

## Images shows others applications-of-Artificial Intelligence
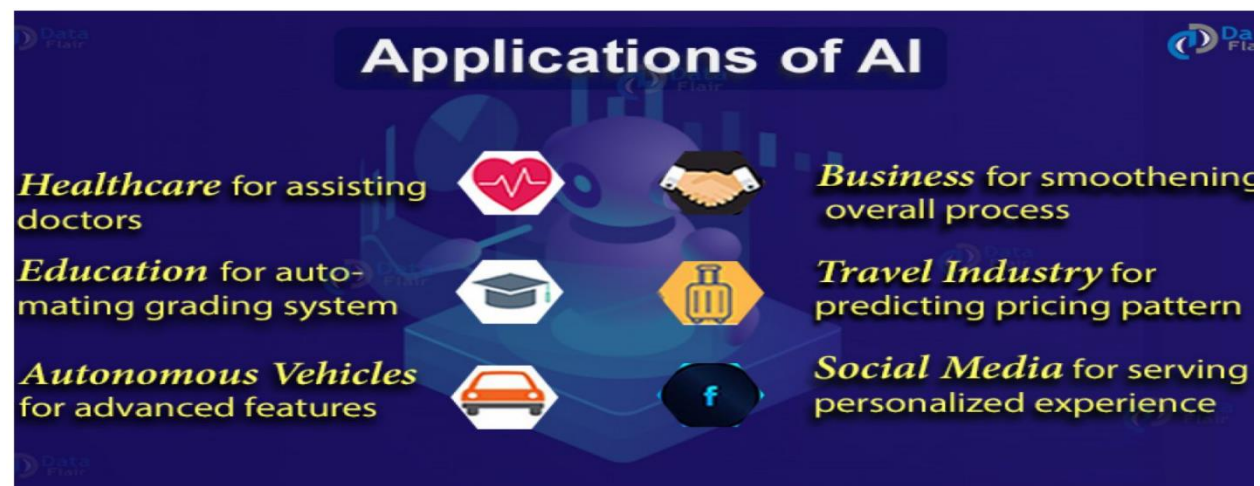
# The dangers of Artificial Intelligence

**links**

When seeing this headline, many AI researchers roll their eyes: "Stephen Hawking warns that the rise of robots may be disastrous for mankind." And as many have lost count of how many similar articles they've seen. These articles are usually accompanied by a robot of evil appearance carrying a sword,And they suggest that we should worry about the rising and killing of robots, because they have become conscious and/or evil. Such articles are, in fact, quite impressive on a lighter note, because they summarize the scenario that AI researchers are not concerned about. That scenario brings together as many as three distinct misconceptions: concern for consciousness, evil, and robots. You have a subjective view of colors, sounds, etc. while driving down the lane. But is there a subjective experience to a self-driving car? Does being a self-driving car actually feel like anything at all? Though this mystery of consciousness is in its own right interesting, it is irrelevant to the risk of AI. If you find yourself hit by a driverless car, it makes no difference to you whether it subjectively feels conscious. In the same way, what will affect us humans is what superintelligent AI does, not how it subjectively feels.Another red herring is the fear of machines which turn evil. The real worry is not malevolence but skill. By definition, a superintelligent AI is very good at achieving its goals, no matter what they may be But we have to make sure the priorities match with ours. Generally speaking, humans don't hate ants but we're smarter than they are – so if we want to build a hydroelectric dam and there's an anthill there, too bad for the ants. The Beneficial-AI movement wants to avoid putting humanity in those ants' position.

# Source code:

```
1   <!DOCTYPE html>
2   <html>
3   <head>
4         <title>Artificial Intelligence main page
5   </title>
6   </head>
7   <body>
8         <h1>Artificial Intelligence main page
9   </h1>
0         <h2>links</h2>
1         <ul>
2    <li><a href="index.html">Main page</a></li>
3    <li><a href="What is Artificial Intelligence.html">What is Artificial Intelligence?</a></li>
4    <li><a href="how artificial intelligence will change the world in future.html">How artificial intelligence will change the world in fut
5     <li><a href="applications on Artificial Intelligence.html">Applications on Artificial Intelligence</a></li>
6      <li><a href="The dangers of Artificial Intelligence.html">The dangers of Artificial Intelligence</a></li>
7   </ul>
8   Artificial intelligence is a branch of computer science that attempts to understand the essence of intelligence and produce a new intelli
9         Theory and technology have become more and more advanced since the advent of artificial intelligence, and the areas of applicatio
0         Artificial intelligence is not human intelligence, but it can be as human intellect, and it can surpass the intelligence of man.
1      <h3>History of Artificial Intelligence</h3>
2         Artificial Intelligence ( AI) history started in the antiquity, with myths , stories and rumors of artificial beings created by m
3         This research resulted in the 1940s invention of the programmable digital computer, a system based on the mathematical reasoning'
4         of creating an artificial brain seriously.The field of AI research was developed during the summer of 1956 at a workshop held on
5       <h3>The birth of artificial intelligence 1952-1956</h3>
6         In the 1940s and 50s, a handful of scientists from a variety of fields (mathematics, psychology, engineering, economics and polit
7         In 1950 Alan Turing published a landmark paper in which he speculated on the possibility of creating machines that think.40 He no
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      there were development in this field until AI from 1993-2011
      <h3>AI 1993-2011</h3>
      The AI field, now over half a century old, has at last achieved some of its oldest goals. It began to be used widely in the techn
      On 11 May 1997, Deep Blue became the first computer chess-playing machine to defeat a reigning world chess champion, Garry Kaspar
</body>
</html>
```

```html
<!DOCTYPE html>
<html>
<head>
    <title>The Definition of Artificial Intelligence page
</title>
</head>
<body>
    <h1>The Definition of Artificial Intelligence page
</h1>
    <h2>links</h2>
    <ul>
  <li><a href="Artificial Intelligence main page.html">Main page</a></li>
  <li><a href="What is Artificial Intelligence.html">What is Artificial Intelligence?</a></li>
  <li><a href="how artificial intelligence will change the world in future.html">How artificial intelligence wil
  <li><a href="applications on Artificial Intelligence.html">Applications on Artificial Intelligence</a></li>
    <li><a href="The dangers of Artificial Intelligence.html">The dangers of Artificial Intelligence</a></li>
</ul>
<h2>The Definition of Artificial Intelligence</h2>
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Artificial intelligence is based on the idea that human intelligence should be described in such a way that a co
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<h2> Types of Artificial Intelligence </h2>
<img src="types-of-artificial-intelligence.png" alt="types-of-artificial-intelligence">
</body>
</html>
```

```html
1   <!DOCTYPE html>
2   <html>
3   <head>
4           <title>Application on Artificial Intelligence
5   </title>
6   </head>
7   <body>
8           <h1>Application on Artificial Intelligence
9   </h1>
10          <h2>links</h2>
11          <ul>
12    <li><a href="index.html">Main page</a></li>
13    <li><a href="What is Artificial Intelligence.html">What is Artificial Intelligence?</a></li>
14    <li><a href="how artificial intelligence will change the world in future.html">How artificial intelligence will change the world in futur
15      <li><a href="applications on Artificial Intelligence.html">Applications on Artificial Intelligence</a></li>
16        <li><a href="The dangers of Artificial Intelligence.html">The dangers of Artificial Intelligence</a></li>
17  </ul>
18  <h2>Hospitals and medicine</h2>
19          Artificial neural networks are used as clinical decision support systems for medical diagnosis, such as in Concept Processing techn
20
21    Other tasks in medicine that can potentially be performed by artificial intelligence and are beginning to be developed include:
22
23    Computer-aided interpretation of medical images. Such systems help scan digital images, e.g. from computed tomography, for typical appeara
24    Heart sound analysis
25    Companion robots for the care of the elderly
26    Mining medical records to provide more useful information.
27    Design treatment plans.
28    Assist in repetitive jobs including medication management.
29    Provide consultations.
30    Drug creation
31    Using avatars in place of patients for clinical training
32    Predict the likelihood of death from surgical procedures
33    Predict HIV progression
34  <h2>Education</h2>
35          AI tutors could allow for students to get extra, one-on-one help. They could also reduce anxiety and stress for some students, that
36          But AI can also create a disadvantageous environment with revenge effects, if technology is inhibiting society from moving forward
37  <h2>Images shows  others applications-of-Artificial Intelligence</h2>
38  <img src="application-of-ai1.png" alt="Applications-of-AI">
39  <img src="applications-of-ai.jpg" alt="Applications-of-AI">
```

```html
<!DOCTYPE html>
<html>
<head>
    <title>The dangers of Artificial Intelligence
</title>
</head>
<body>
    <h1>The dangers of Artificial Intelligence
</h1>
    <h2>links</h2>
    <ul>
  <li><a href="Artificial Intelligence main page.html">Main page</a></li>
  <li><a href="What is Artificial Intelligence.html">What is Artificial Intelligence?</a></li>
  <li><a href="how artificial intelligence will change the world in future.html">How artificial intelligence wil
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</body>
</html>
```

```html
<!DOCTYPE html>
<html>
<head>
    <title>Artificial Intelligence in future
</title>
</head>
<body>
    <h1>Artificial Intelligence in future
</h1>
    <h2>links</h2>
    <ul>
  <li><a href="Artificial Intelligence main page.html">Main page</a></li>
  <li><a href="What is Artificial Intelligence.html">What is Artificial Intelligence?</a></li>
  <li><a href="how artificial intelligence will change the world in future.html">How artificial intelligence w
   <li><a href="applications on Artificial Intelligence.html">Applications on Artificial Intelligence</a></li>
     <li><a href="The dangers of Artificial Intelligence.html">The dangers of Artificial Intelligence</a></li>
</ul>
 <h2> A table shows how artificial intelligence will change the world in future </h2>
<table style="width:100%">
```

```html
  </tr>
  <tr>
    <td>AI in driverless cars (e.g., Tesla)</td>
    <td>In the future, AI-enabled cars may allow for car journeys without any driver input, with t
  </tr>
  <tr>
    <td>Online retailing AI (e.g., Birchbox)</td>
    <td>AI will enable better predictions for what customers want, which may cause firms to move a
  </tr>
    <td>Fashion-related AI (e.g., Stitch Fix)</td>
    <td>AI applications support stylists, who curate a set of clothing items for customers. Stitch
  </tr>
  <tr>
    <td>Business process AI (e.g., IBM Interact)</td>
    <td>AI used for multiple (simple) applications, such as customized offers (e.g., Bank of Montr
  </tr>
 </table>
 </body>
 </html>
```