



Lecture four: Software and Troubleshooting

Software is a collection of instructions that tell a computer how to work. This is in contrast to hardware, from which the system is built and actually performs the work.

Software Requirements

The requirement for a system are the description of what the system should do, the service or services that it provides and the constraints on its operation. The IEEE Standard Glossary of Software Engineering Terminology defines a requirement as:

1. A condition or capability needed by a user to solve a problem or achieve an objective.
2. A condition or capability that must be met or possessed by a system or system component to satisfy a contract, standard, specification, or other formally imposed document.
3. A documented representation of a condition or capability as in 1 or 2.

Software Troubleshooting

What Does Software Troubleshooting Mean?

Software troubleshooting is the process of scanning, identifying, diagnosing and resolving problems, errors and bugs in software.

It is a systematic process that aims to filter out and resolve problems, and restore the software to normal operation. It is a subcategory of IT troubleshooting.

Try these things to troubleshoot network connection issues in **Windows 10**.

- Use the Network troubleshooter. Select **Start > Settings > Network & Internet > Status**. Under **Change your network settings**, select **Network troubleshooter**. [Open Status settings](#)
- Make sure Wi-Fi is on. Select **Start > Settings > Network & Internet > Wi-Fi**. Next, select **Show available networks**, and if a network you expect to see appears in the list, select it, then select **Connect**. [Open Wi-Fi settings](#)
- See if you can use the Wi-Fi to get to websites from a different device. If you can't, restart your modem, router, and device, and re-connect to the Wi-Fi.
 - If your Surface still isn't connecting, try the steps on [Surface can't find my wireless network](#).



Try these things to troubleshoot network connection issues in **Windows 11**.

- Make sure Wi-Fi is on. Select **Start > Settings > Network & internet**, then turn on **Wi-Fi**. Next, select **More options (>)** next to Wi-Fi, then select **Show available networks**. If a network you expect to see appears in the list, select it, then select **Connect**. [Open Wi-Fi settings](#)
- See if you can use the Wi-Fi network to get to websites from a different device. If you can't, restart your modem, router, and device, and re-connect to the Wi-Fi.
- Try turning Wi-Fi on and off. This can solve issues by restarting your connection.
- If your Surface still isn't connecting, try the steps on [Surface can't find my wireless network](#).

For more OS visit: <https://support.microsoft.com/en-us/windows/fix-wi-fi-connection-issues-in-windows-9424a1f7-6a3b-65a6-4d78-7f07eee84d2c>

Optional

Artificial Intelligence VS Human Intelligence

Human Intelligence is the creation of God gifted to humans and Artificial Intelligence is created by humans. Intelligence plays a vital role whether it is human or artificial. Human intelligence is a quality that helps humans in learning, understanding, and solving problems with brilliant ideas whereas artificial intelligence is something that mimics human beings by the information they receive.

Following are the fundamental differences between artificial intelligence and human intelligence

1. If we can compare it nature wise then, human intelligence intends to revise to modern environments by using a mixture of distinct cognitive procedures, whereas artificial intelligence intends to create devices that can mock human behaviour and conduct human-like actions. Thus, we can say that ***the human brain is analogous, but machines are digital.***
2. The simple difference is that ***human beings use their brain, ability to think, memory,*** while ***AI machines depend on the data*** given to them.
3. As we all know that humans learn from past mistakes and intelligent ideas and intelligent attitudes lie at the basis of human intelligence. Hence, this point is simply because machines cannot think and learn from the past. They can learn from information and through regular training, but they can never attain the thinking procedure unique to humans.



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4. Artificial intelligence takes much more time to adjust to the new changes whereas human beings can adapt to changes easily and this makes people able to learn and ace several abilities.
5. Modern *computers normally use 2 watts of energy whereas human brains use about 25 watts.*
6. Machines can handle more data at a speedier rate as compared to humans. As of now, humans cannot beat the speed of computers.
7. Artificial Intelligence has not ached the ability to choose up on related social and excited codes. People are many ways better at social interaction since they can develop academic data, have self-awareness, and are elegant to others' emotions.

Human Brain vs. AI: Who is the Winner?

<http://www.differencebetween.net/science/difference-between-artificial-intelligence-and-human-intelligence/>