Introducing the 5 Big Ideas in Artificial Intelligence using Internet of Things in STEM education

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Great news from the AI4STEM project. In recent months, the AI4STEM curriculum consisting of six modules has been developed. The objective of these modules is to smoothly introduce both educators and students into various aspects of AI by offering essential information in a clear way, and by proposing several educational activities and strategies through the lens of the 5 Big Ideas and IoT.
The six modules are:

- AI & its applications in everyday life
- AI & Generative Applications
- Application of AI in Robotics
- Application of AI in Speech
- Application of AI in Vision
- Application of AI in Games & Puzzles

In summary, the first module revolves around defining AI and its common applications in our life. The second module emphasizes on AI in STEM education and Generative AI applications that can facilitate STEM learning. The third module centers on AI in Robotics, in the context of STEM education and IoT. The fourth module showcases various AI applications in Speech. The fifth module explores the use of AI in Vision across multiple aspects of life. Finally, the sixth module is focused on AI in gaming applications and puzzles. All six modules are accompanied by educational activities and assessment quizzes, aiding in the seamless integration and implementation of AI in the classroom.

Work in progress

A series of STEM projects that showcase the concepts featured within the AI4STEM curriculum are being currently developed. These projects will blend aspects of AI and IoT and will be divided in 5 main Activities, reflecting each one of the 5 Big Ideas. They will contain educational material and resources for both educators and students, helping them to unpack and fully grasp core ideas behind AI, machine learning, IoT and programming, as well as to develop and expand their skills and knowledge on all the aforementioned aspects and topics.

Future steps...

The AI4STEM IoT Kit will be created. The kit will consist of boards, sensors, electronics and peripherals that can support the development of the aforementioned STEM projects, and can be easily used by students aged between 8 and 15.

For more visit project website: https://ai4stem.erasmusplus.website/

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