

Computer science

with Dr Remo Pareschi

Talking points

Knowledge

1. What is semantic processing?

Comprehension

2. How does the structure of traditional artificial intelligence (AI) frameworks limit their effectiveness and scalability?
3. What are the similarities and differences between a traditional AI framework and Remo's Topic-Based Communication Space Petri Net (TB-CSPN) AI framework?
4. How does the TB-CSPN framework overcome the limitations of traditional AI frameworks?

Application

5. How do you think the TB-CSPN framework could be used to support sustainable agriculture? What different topic spaces could it contain?

Analysis

6. Why is it important that humans work alongside AI systems?

Evaluation

7. Why do you think Remo is keen to emphasise that computer science is "not just a matter of writing code efficiently"? What problems will occur if computer scientists only focus on the technical aspects of their work?
8. How and why do you think studying philosophy would benefit your understanding of computer science and AI?

Activities

Demonstrating the advantages of a TB-CSPN framework

Design a practical activity to teach your classmates about the differences between traditional AI frameworks and Remo's Topic-Based Communication Space Petri Net (TB-CSPN) AI framework.

For example, the article uses the idea of passing notes through a classmate to explain the concept of large language models (LLMs) as the central model in traditional AI frameworks. How could you incorporate this into a practical task to demonstrate the concept? How could you expand on this analogy to demonstrate the advantages of a TB-CSPN framework?

Promoting computer science skills

Create an engaging and informative poster that could be displayed in a computer science classroom to highlight the range of skills needed by computer scientists. What tips and advice would you give to students to help them develop key computer science skills?

More resources

- Learn coding for free through Codecademy: [codecademy.com](https://www.codecademy.com)
- Practise coding through GitHub, a platform where anyone can share and edit open source code: github.com