CPS Education Panel

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Challenges

Uneven prerequisites and limited depth

One course cannot cover all CPS foundations for students with different backgrounds.

Curriculum pathways and institutional constraints

A survey, course sequence or concentration? Crowded curricula limit expansion.

AI skills and effective assessment

LLM demand competes with foundations. AI tools complicate assessment of learning.

CPS identity and career visibility

Robotics and physical AI overlap with CPS. Employers often use other labels.

Reusable and accessible teaching resources

Projects need setup, equipment and funding. Materials need broader disciplinary coverage.

Proposed Action Items

Discussion proposals. No owners or deadlines assigned.

Clarify introductory course outcomes

Define prerequisites and pathways, including possible CPS concentrations.

Share model courses and CPS projects

Create reusable modules and a project library with setup guidance and grading tools.

Explore support for educational testbeds

Seek possible NSF support for course development and schools needing equipment.

Connect CPS education with physical AI

Reach employers and offer tutorials or workshops at leading AI/ML conferences.

Develop interactive learning materials

Create online textbooks, explanatory blogs and short videos that teach CPS concepts.