

AIR4Children: Artificial Intelligence and Robotics for Children

Workshop on Child-Robot Interaction & Child's Fundamental Rights

#HRI2021 March 08, 2021

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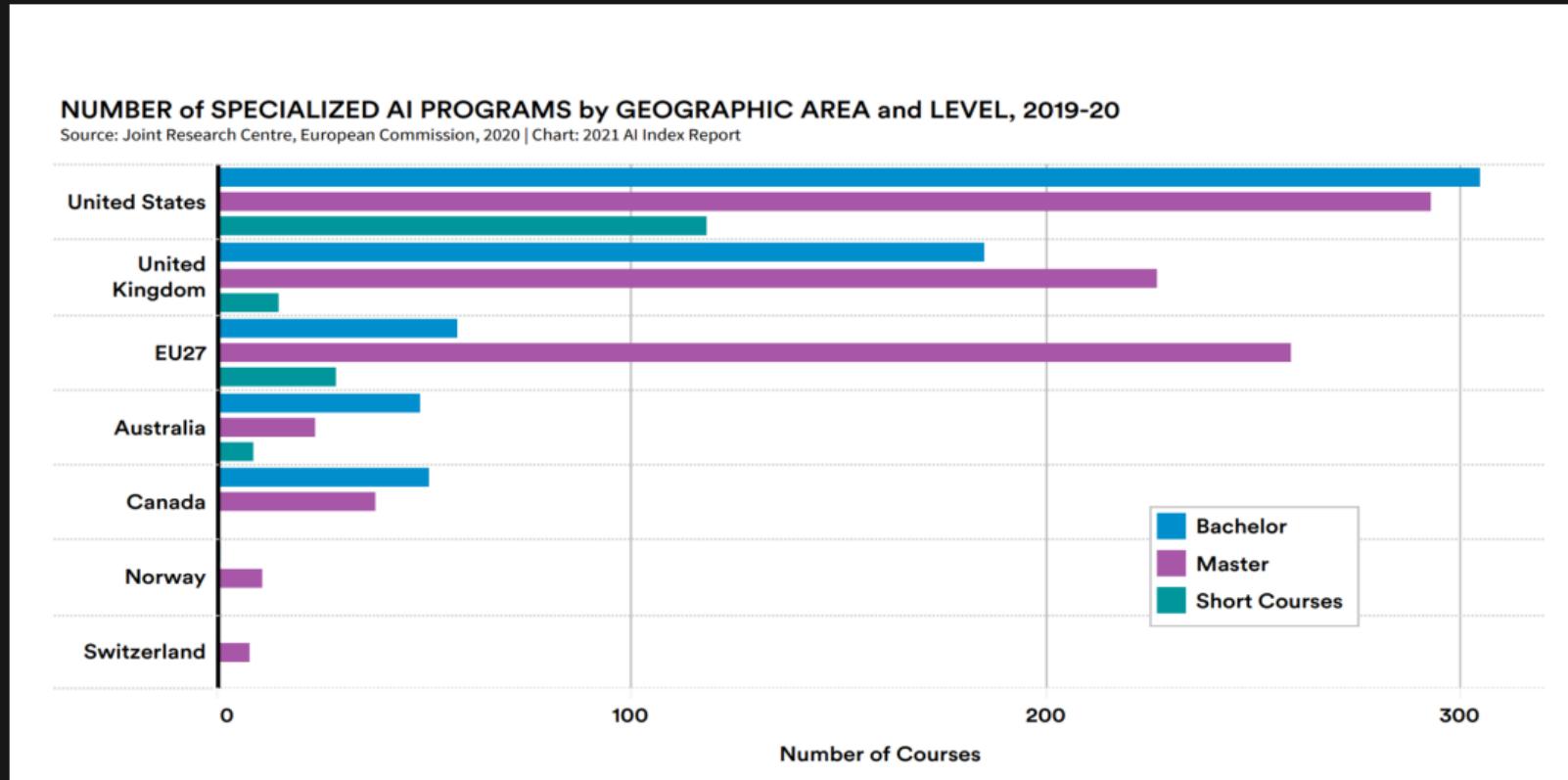
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- 1.2. Open source software and hardware in AIR

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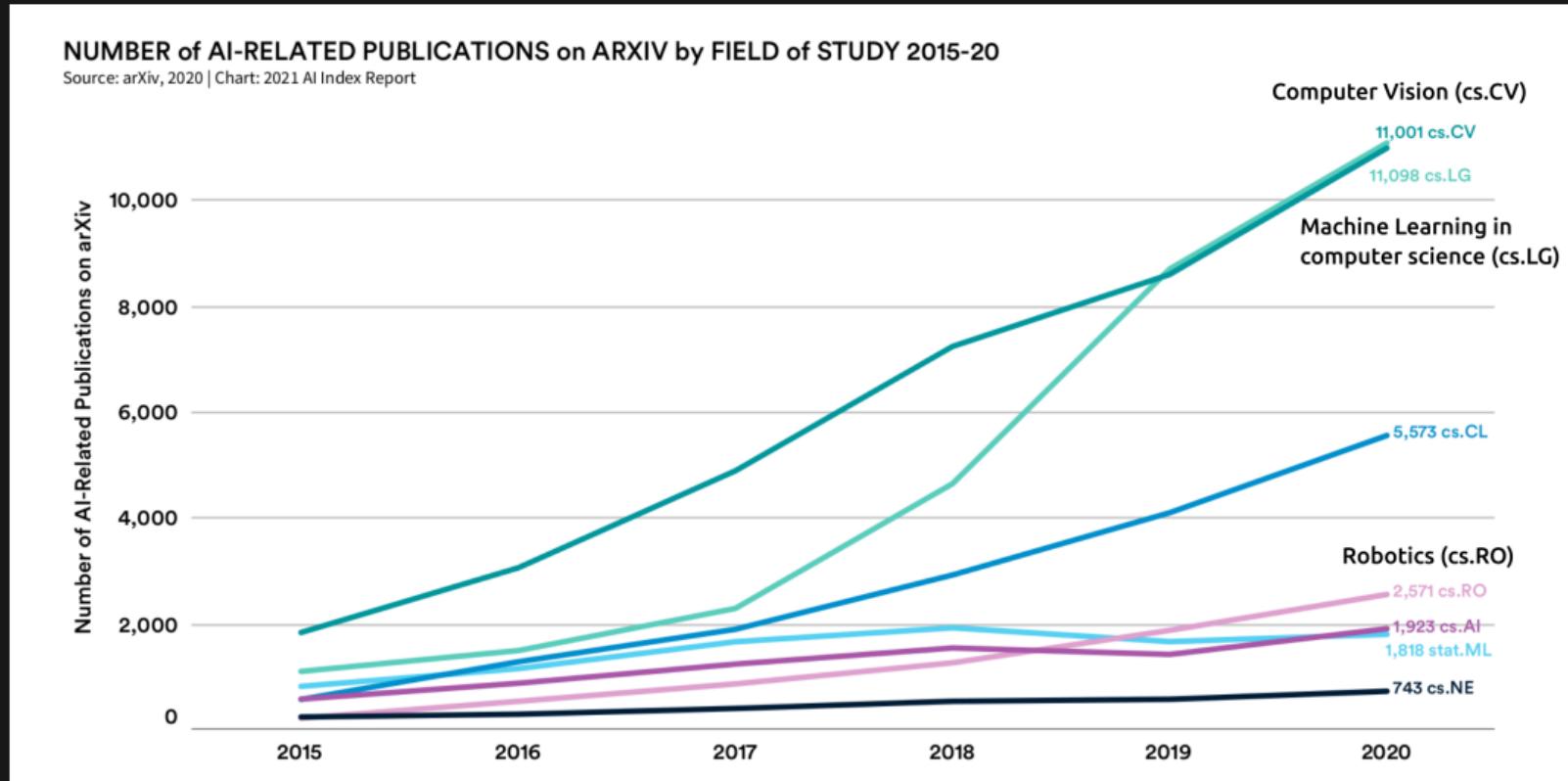
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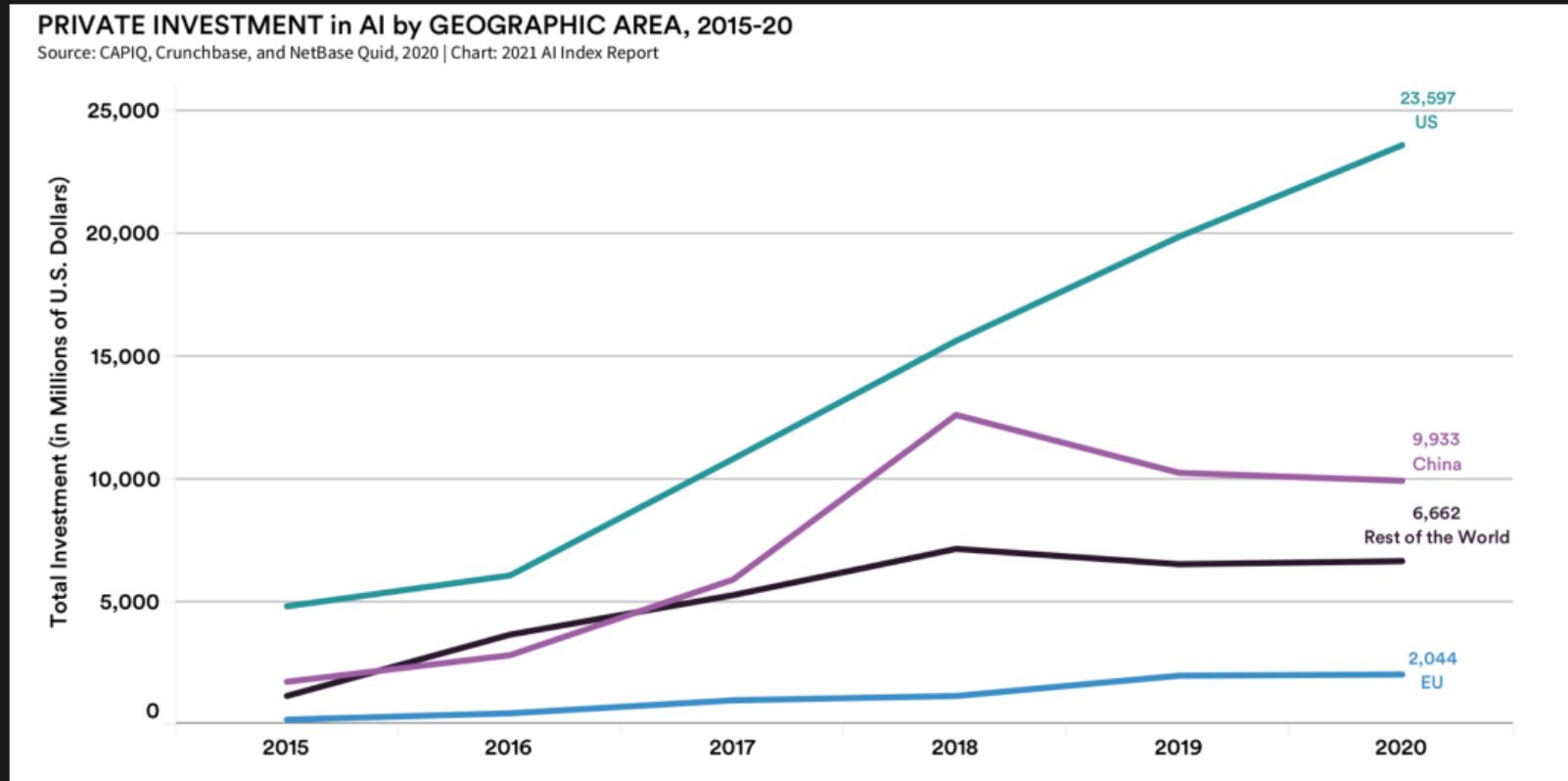
The progress of AI and Robotics in USA, China and EU



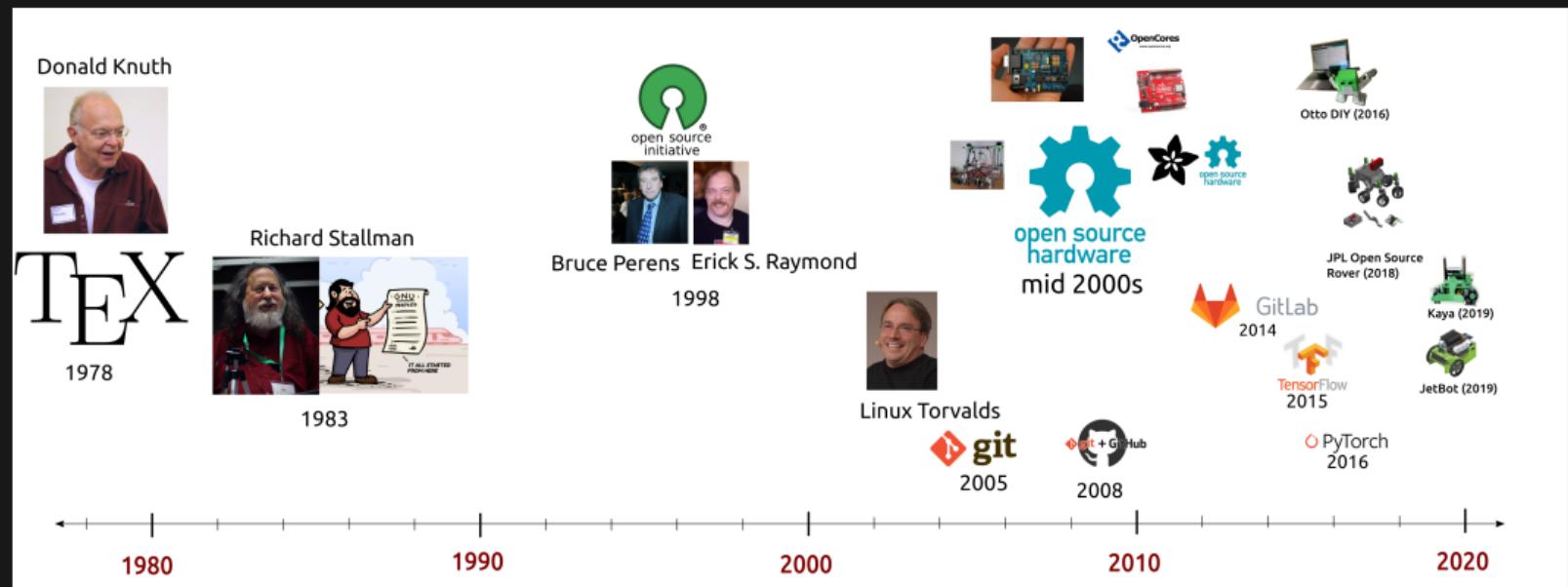
The progress of AI and Robotics in USA, China and EU



The progress of AI and Robotics in USA, China and EU



Open source software and hardware in AIR

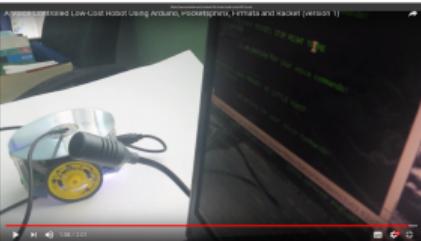


Prototyping Open Source Robots

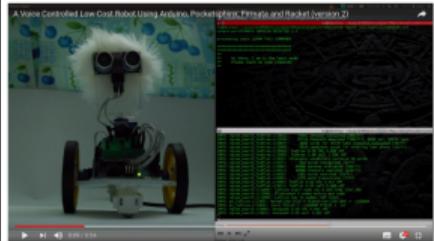
V00-MAY2014



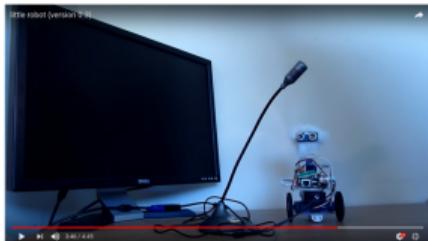
V01-JUNE2014



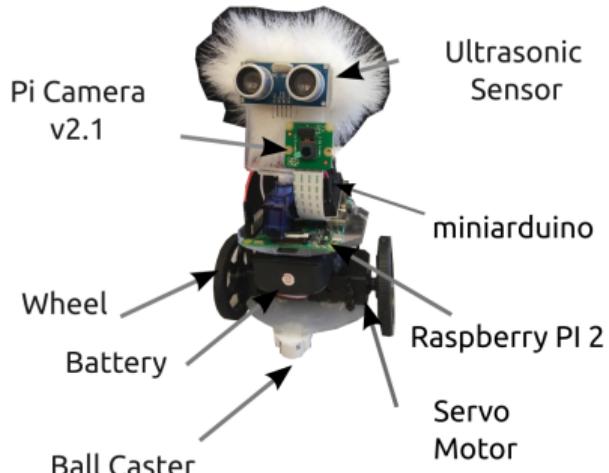
V02-JULY2014



V03-APRIL2016



V04-DEC2017



Piloting robot prototypes



June 2015



October to December 2020

Adopting Montessori Education in the curriculum of AIR4Children

"The hand is the instrument of the mind." Dr. Maria Montessori (1970-1952).



Building
Trinomial cube



Using
4 cylinder blocks

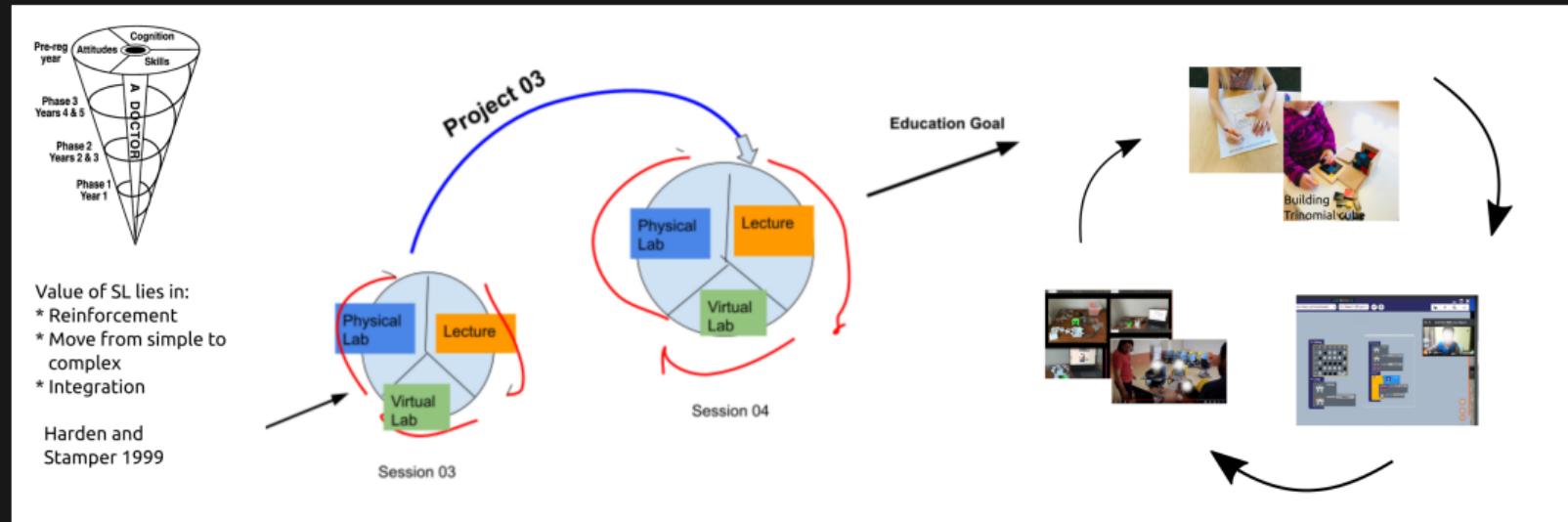


Relating human anatomy with AI/Robot anatomy



- * participate in creative explorations, develop fine motor skills, engage in collaborative and teamwork activities

Adopting Spiral Learning Methods in the curriculum of AIR4Children



Conclusions and future work

Conclusions

We proposed AIR4children to create

- ▶ a more inclusive, affordable and fair participation of children in AI and Robotics,
- ▶ child-centred AI and Robotics based on Spiral Learning and Montessori Education, and
- ▶ Open source robots to be affordable and fun

Future work

- ▶ Piloting AIR4Children in Xicohtzinco, México
- ▶ Evaluation of the impact of AIR to children, instructors and parents.



Acknowledgements



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