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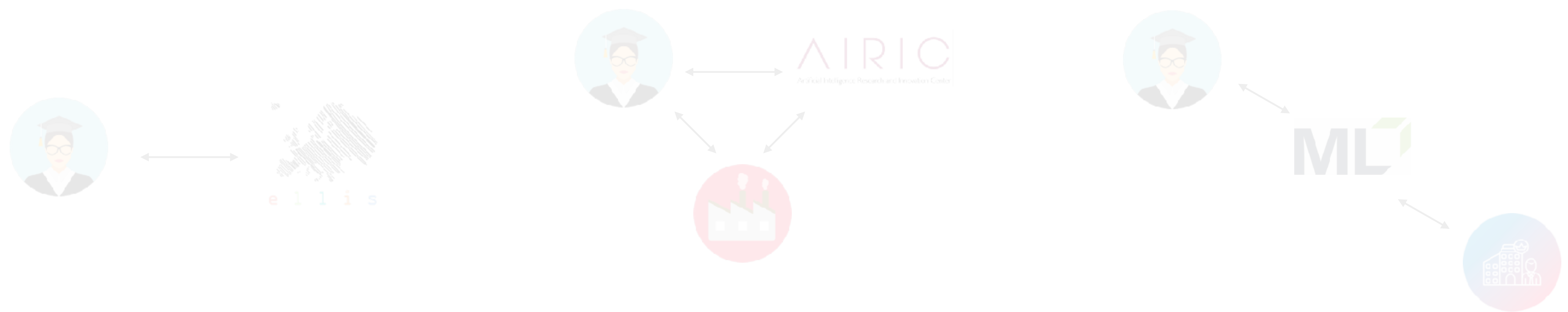
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Foundational research



Creating the **AI** of the **future**

amazon



Meta Google

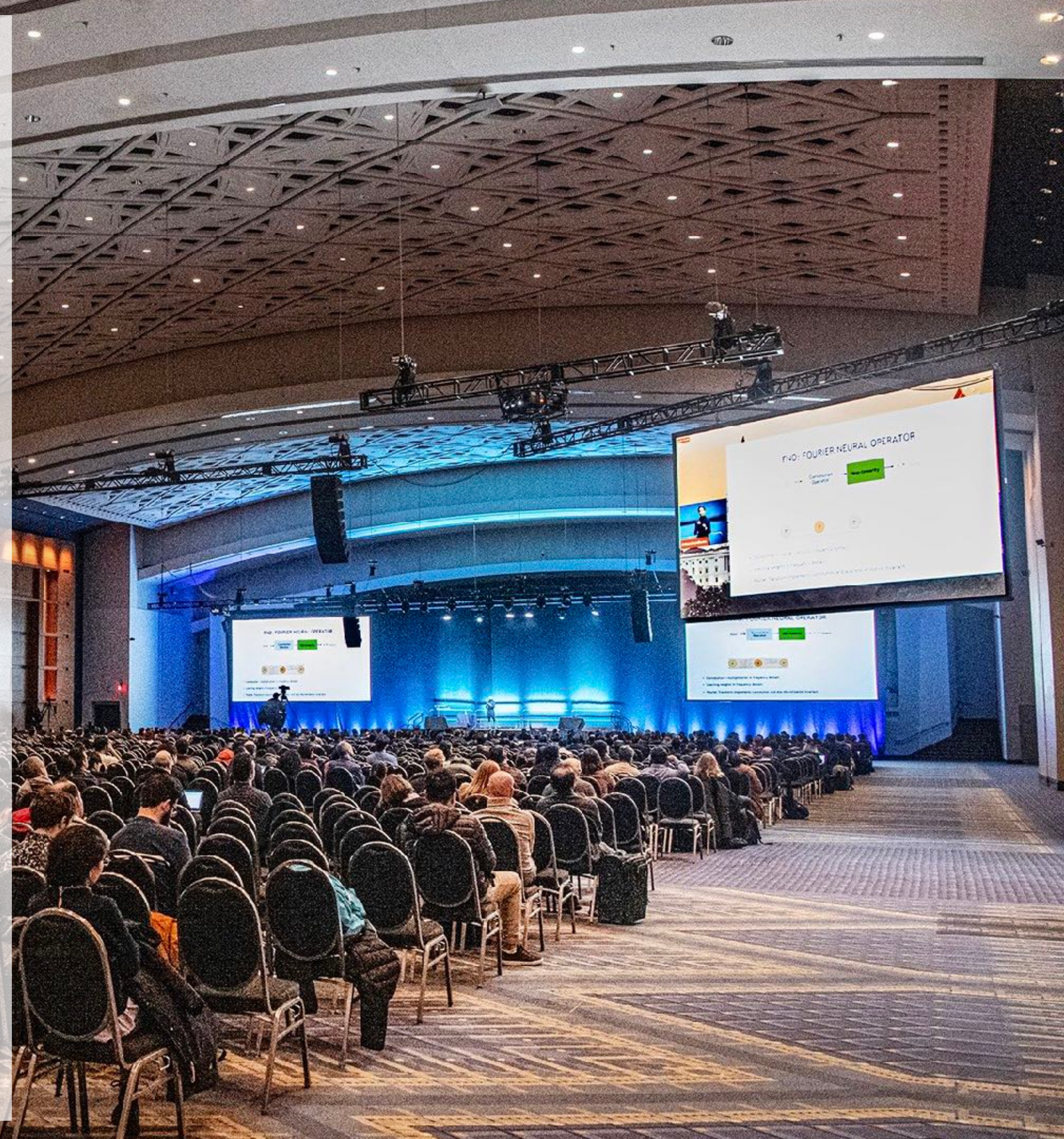


Microsoft

MIT
Massachusetts
Institute of
Technology



Carnegie
Mellon
University



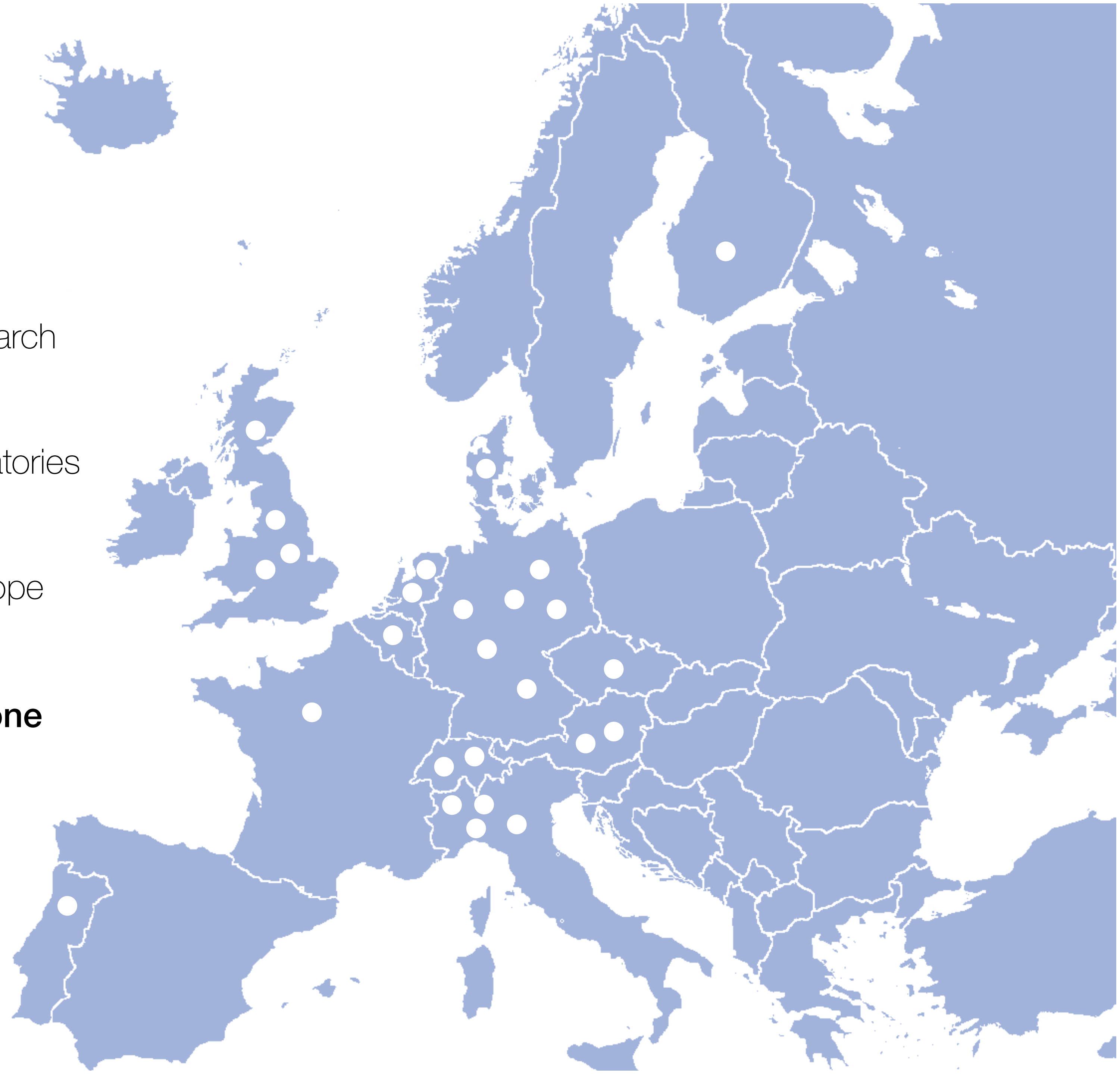


Ellis gathers **European excellence** in scientific research

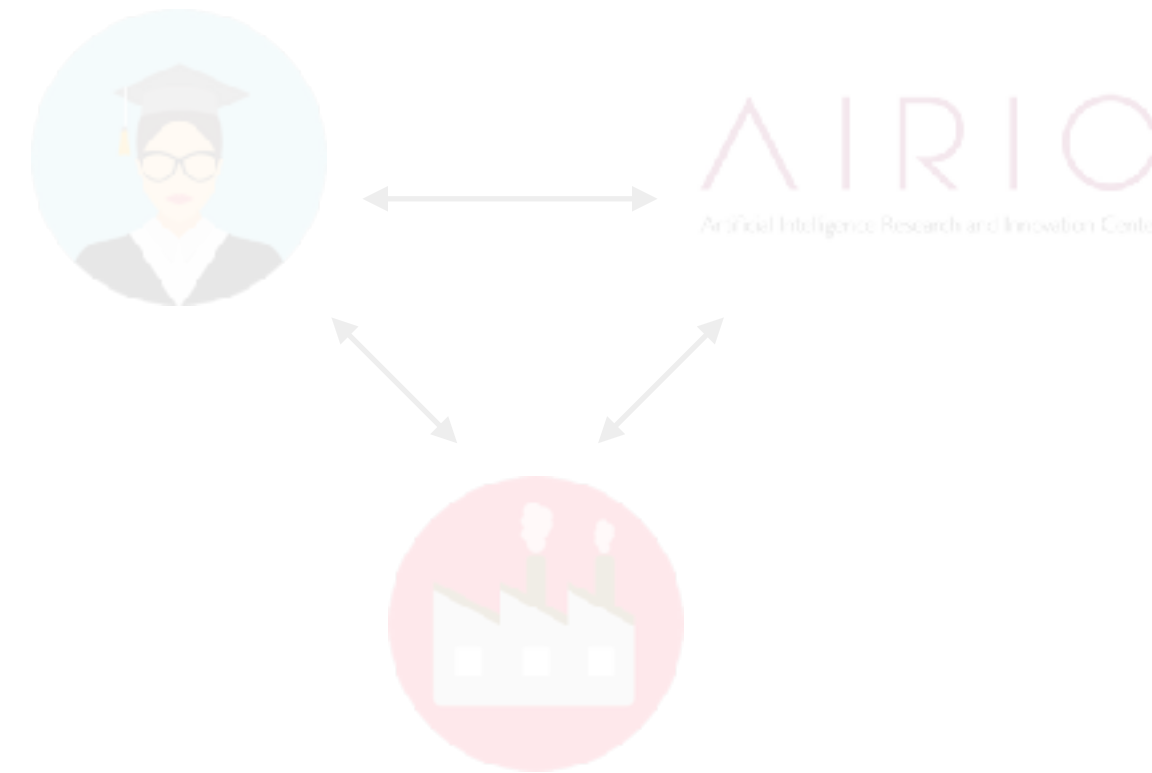
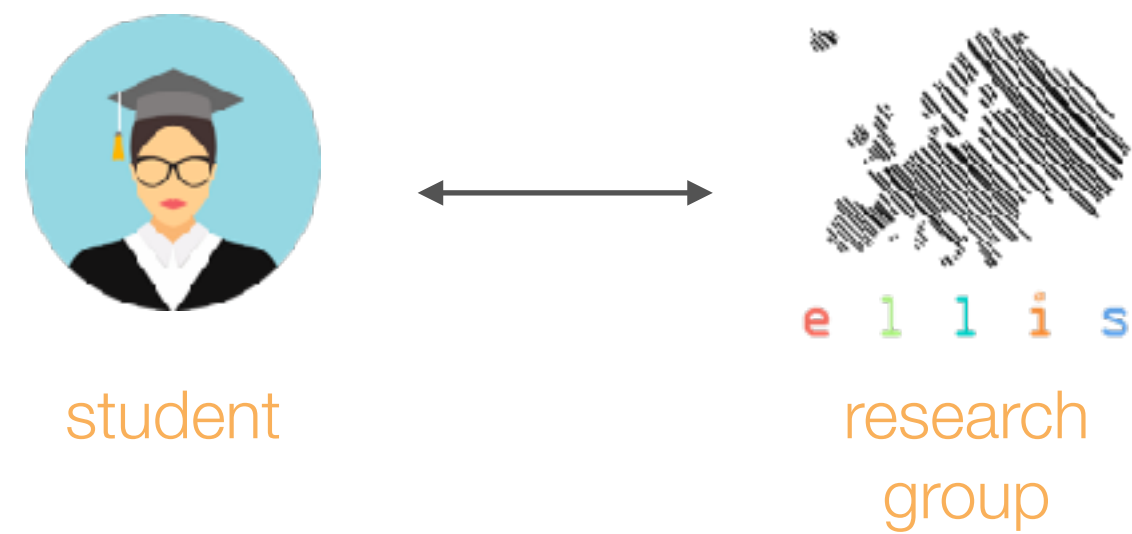
Goal: competing with the top US and China laboratories

Since September 2019, > 30 units created in Europe

Ellis Milan Unit is the largest Italian unit and one of the European top



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Expected outcome

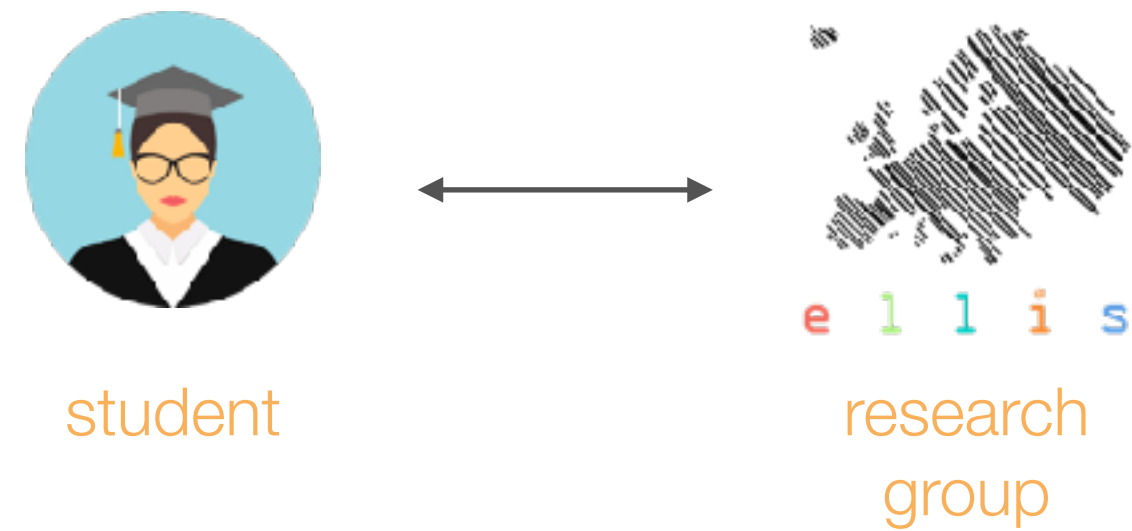
- A new scientific breakthrough
- Publication in a top-ranked venue

Primary perspectives

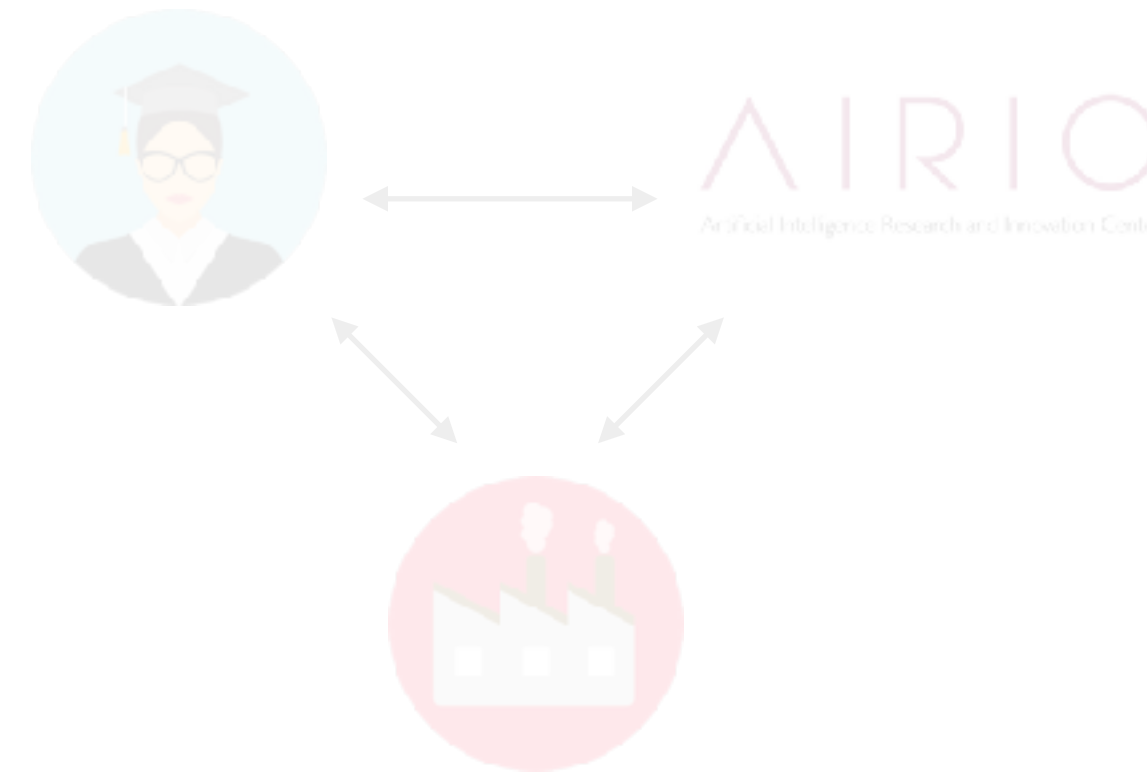
- National/international research laboratories
- PhD program
- AI/ML scientist



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Industrial research



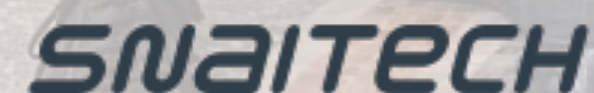
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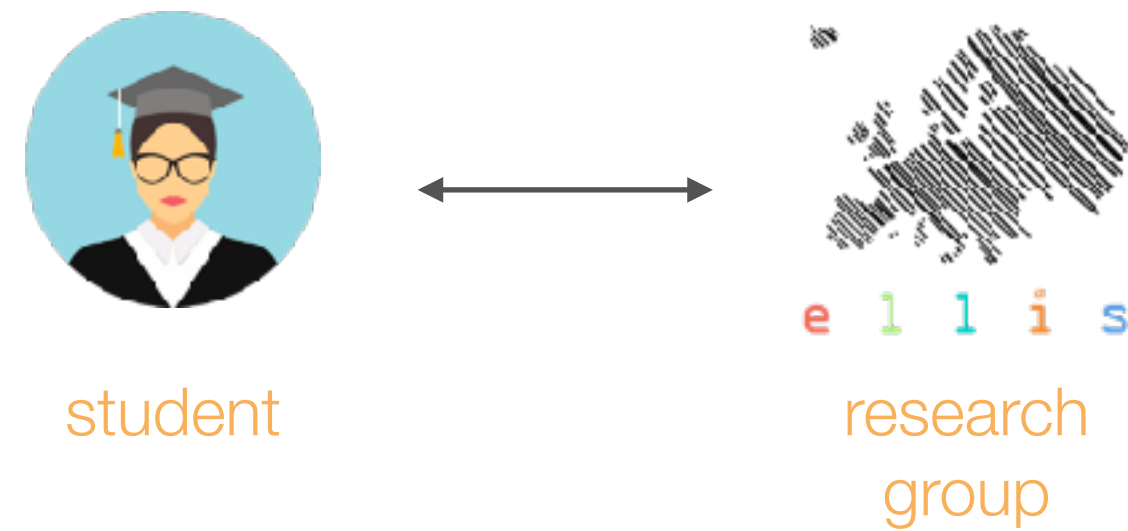
- National/international research laboratories
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Supporting the **AI revolution**
of the companies



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Foundational research



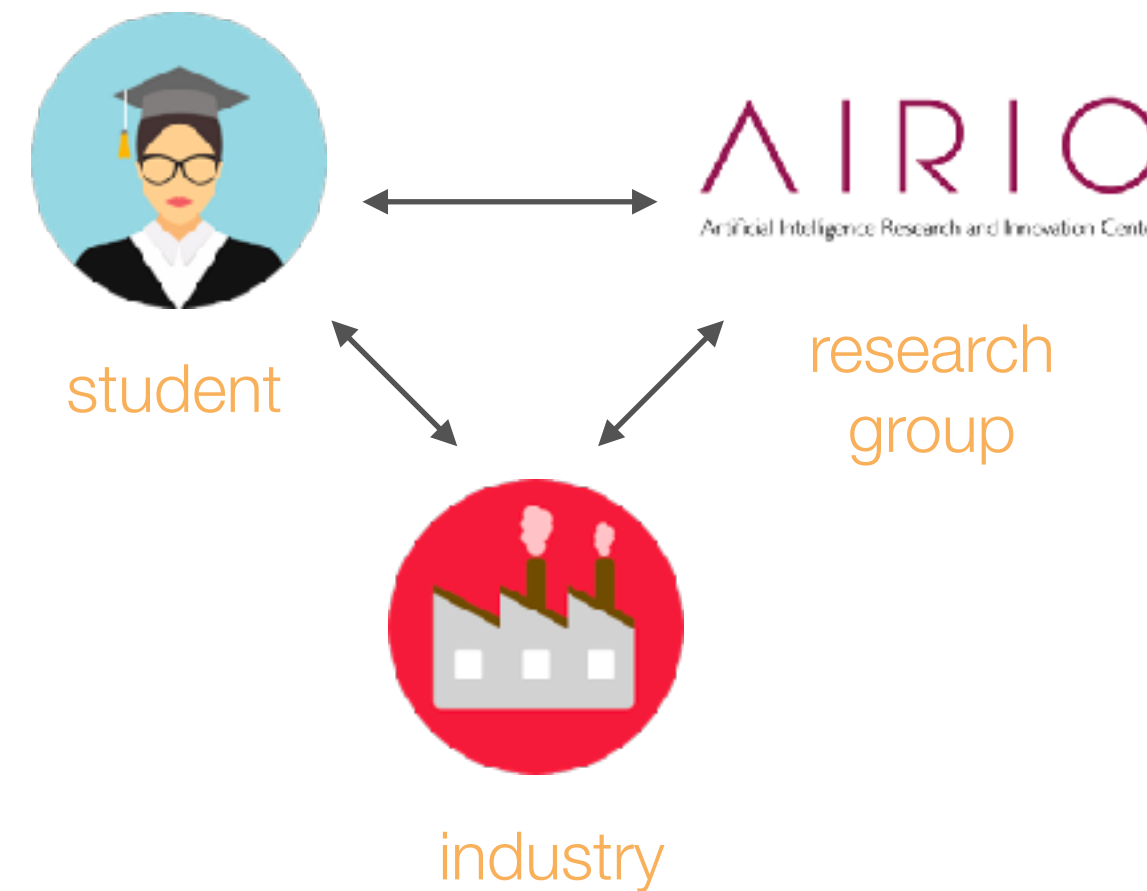
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Industrial research



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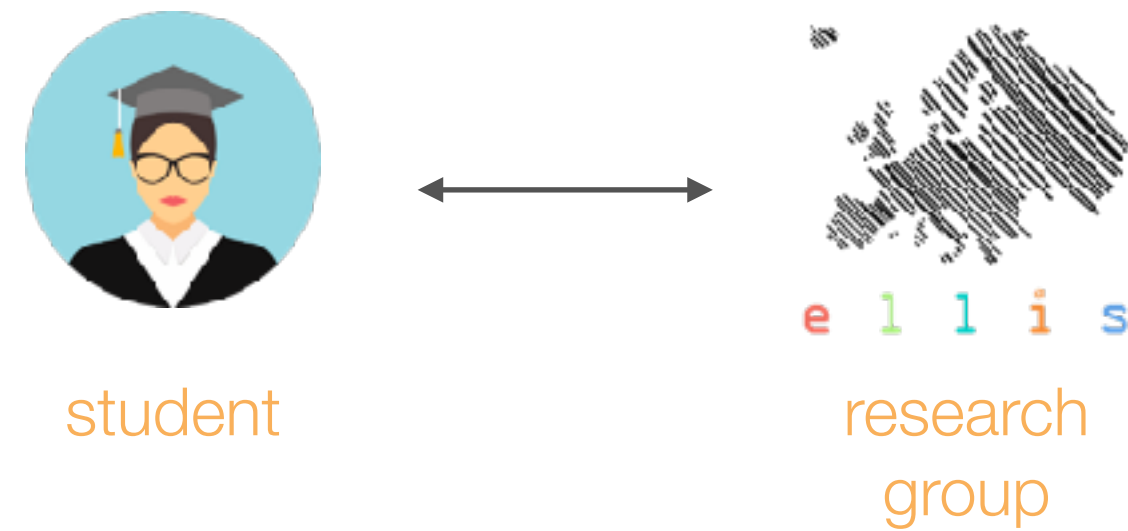
- Design of a Proof of Concept
- Real-world test

Primary perspectives

- Industrial research and development (R&D) groups
- AI/ML scientist/engineering



Foundational research



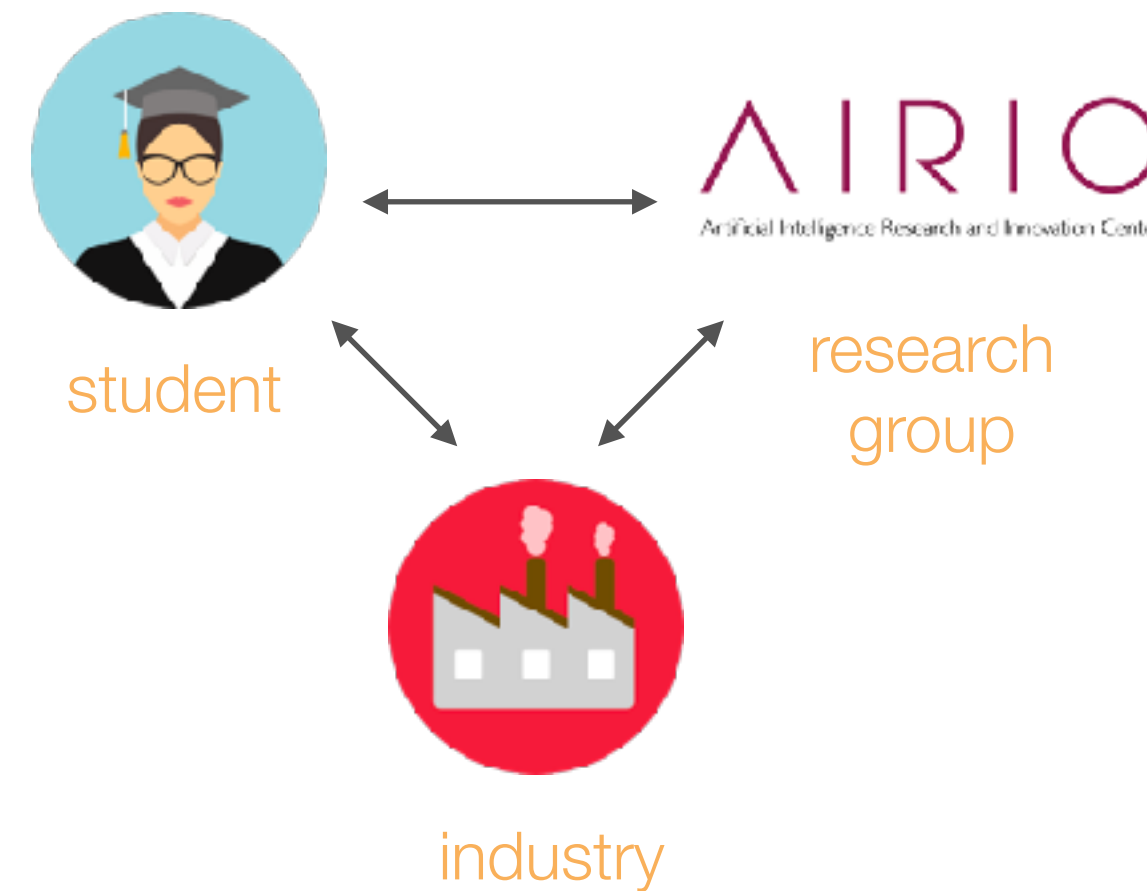
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Industrial research



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Industrial deployment



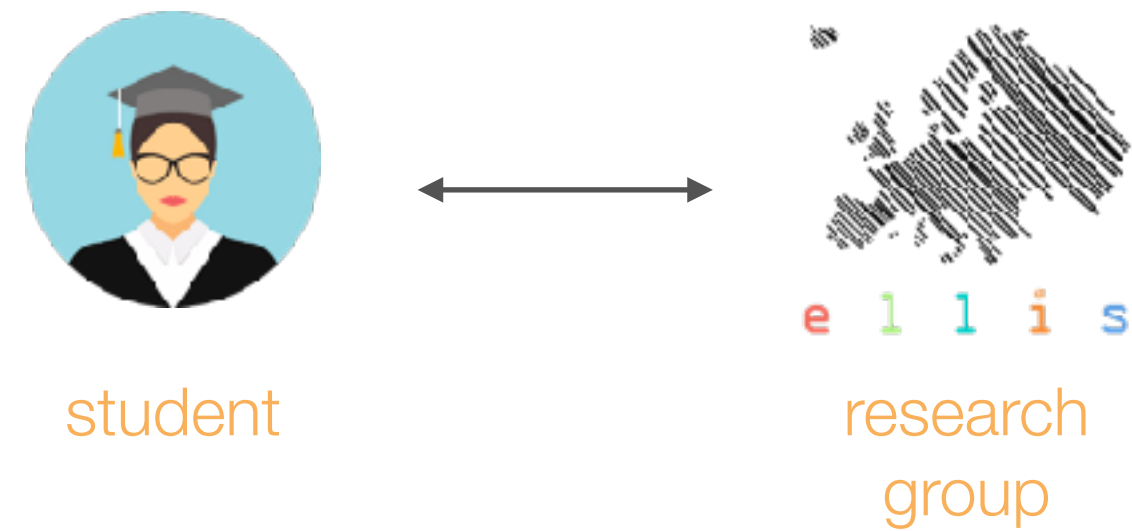


Living an **experience** in an **AI** company

MLcube



Foundational research



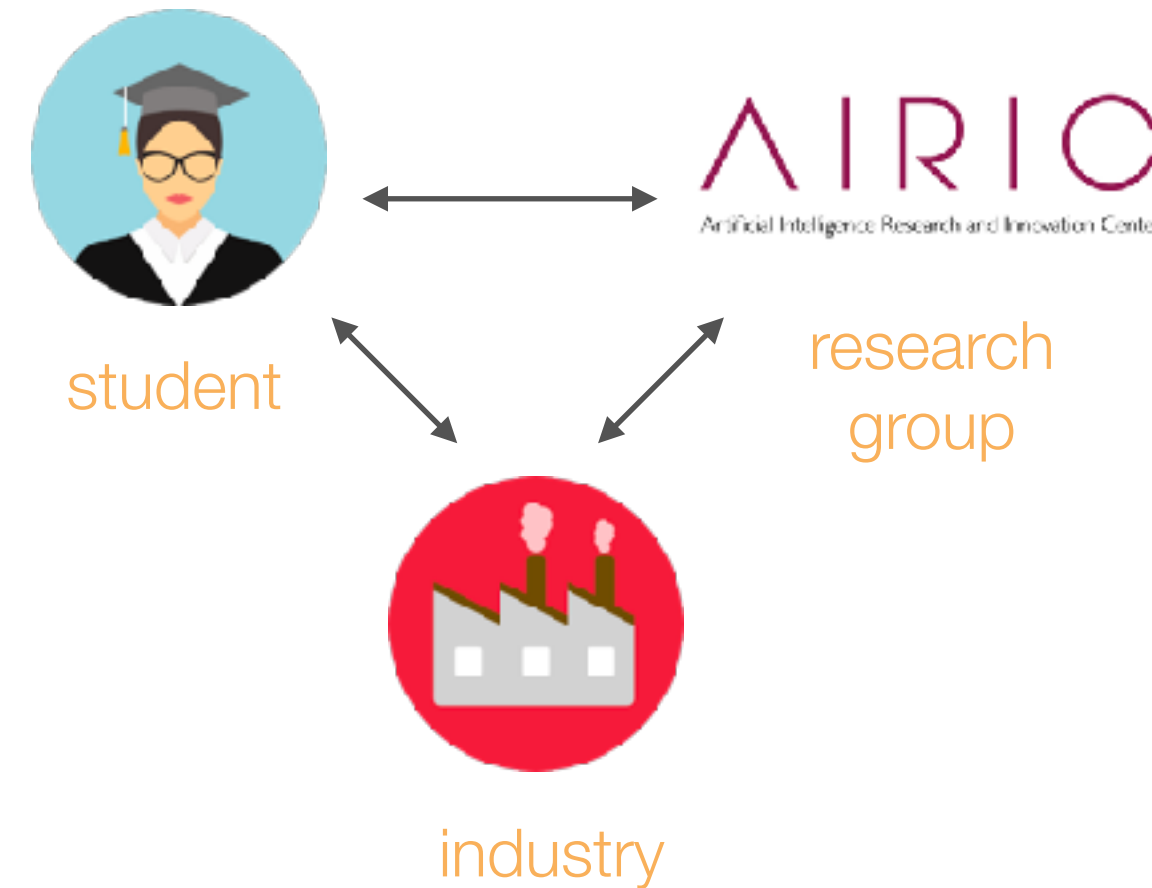
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Industrial research



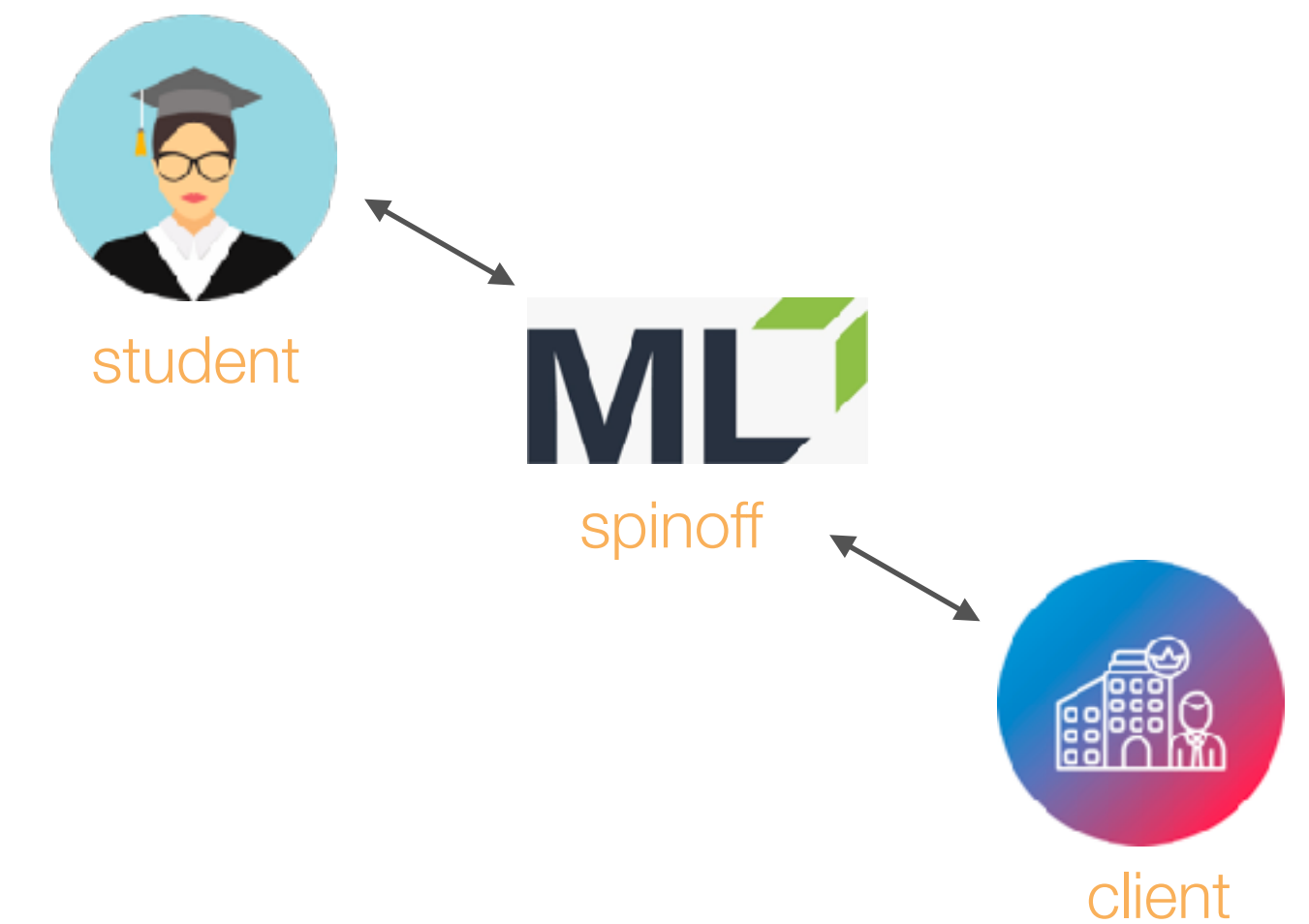
Expected outcome

- Design of a Proof of Concept
- Real-world test

Primary perspectives

- Industrial research and development (R&D) groups
- AI/ML scientist/engineering

Industrial deployment



Expected outcome

- Real-world system development
- AI system deployment

Primary perspectives

- Industry
- AI/ML engineering



Machine learning

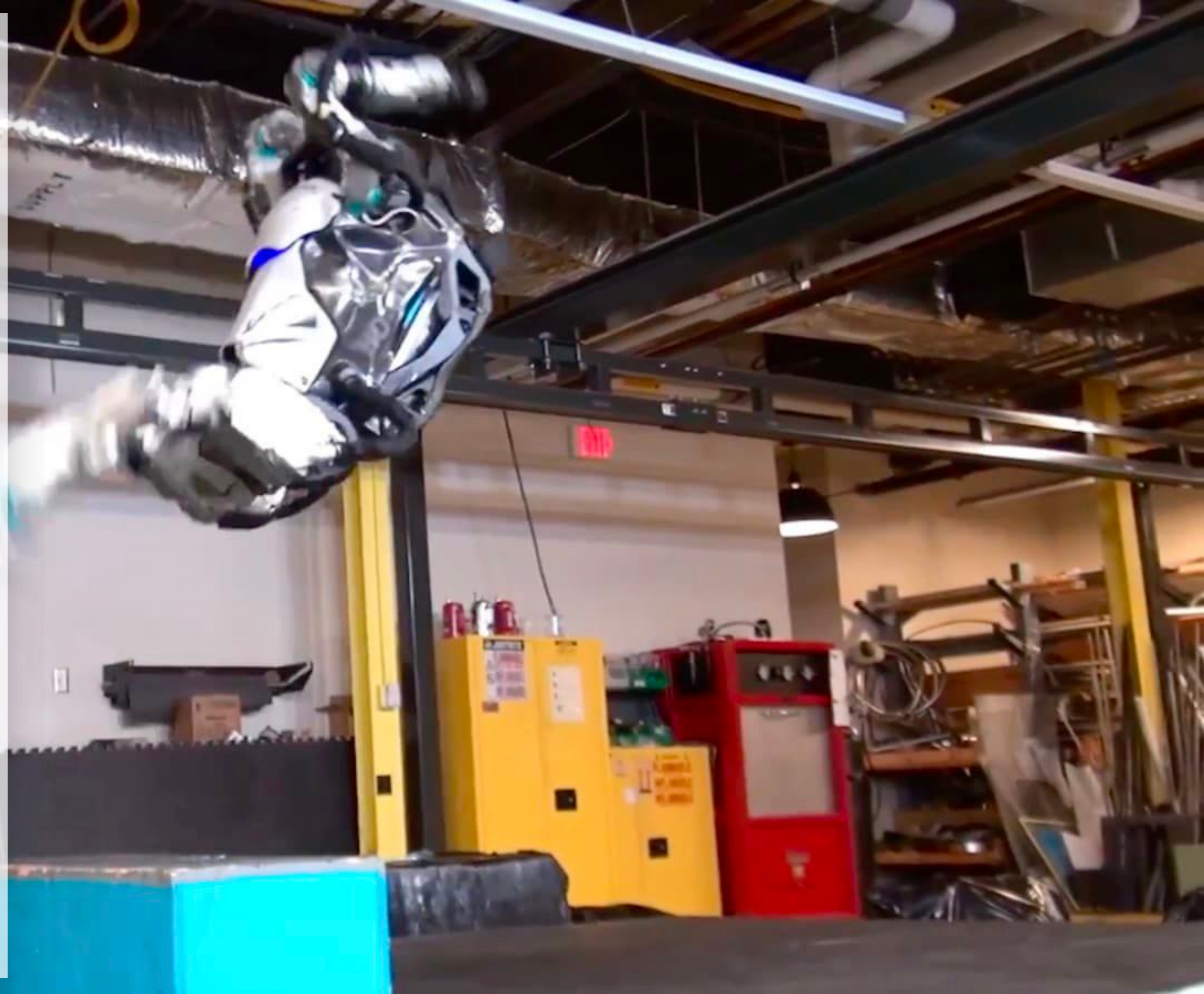
- Data-driven learning of models
- Learn to predict target variable and/or group data based on their characteristic
- Address complex high-dimensional sparse datasets

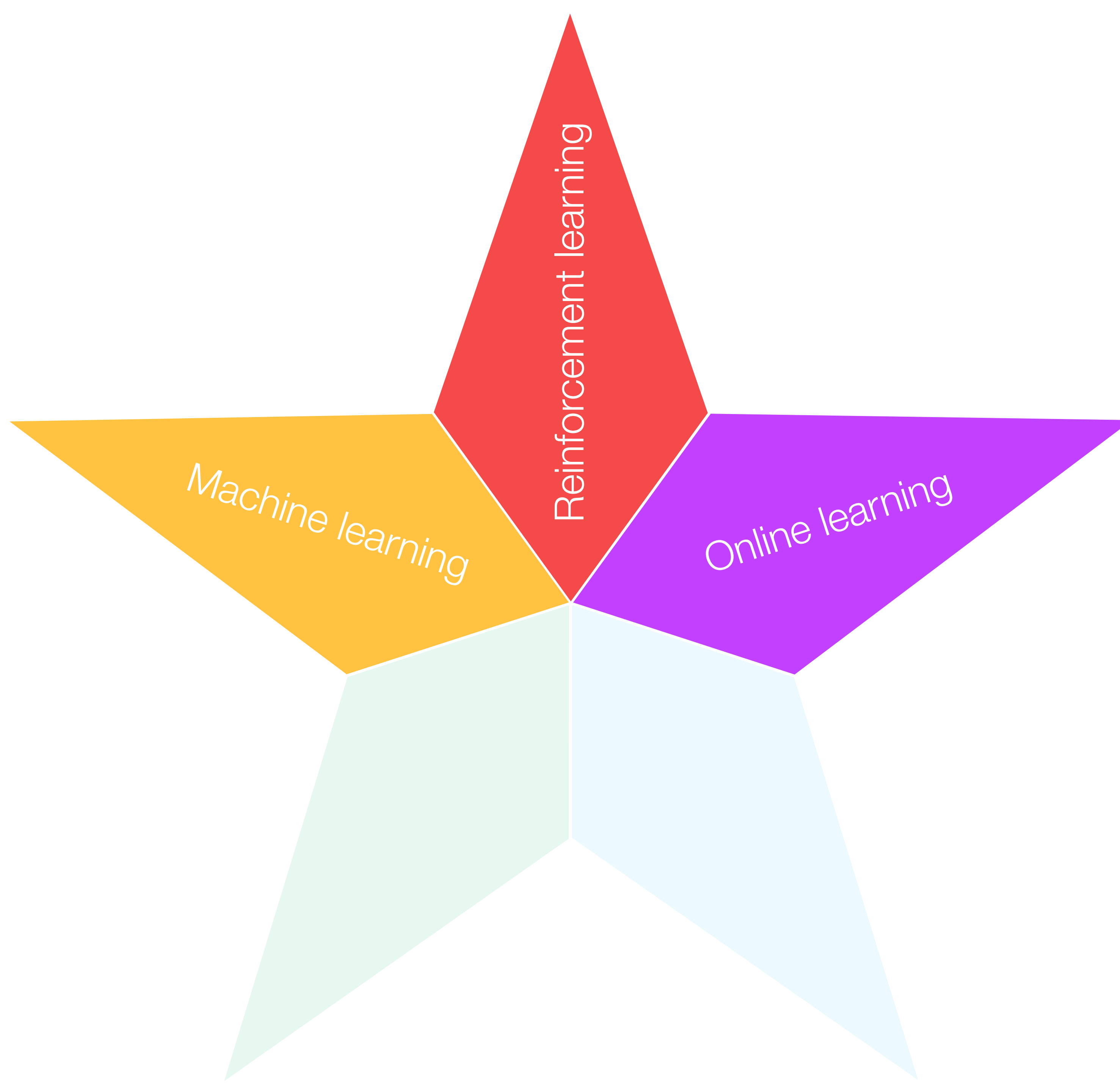




Reinforcement learning

- Sequential agent-environment interaction
- Learn the decisions to maximize the cumulative reward
- Wide-range applications

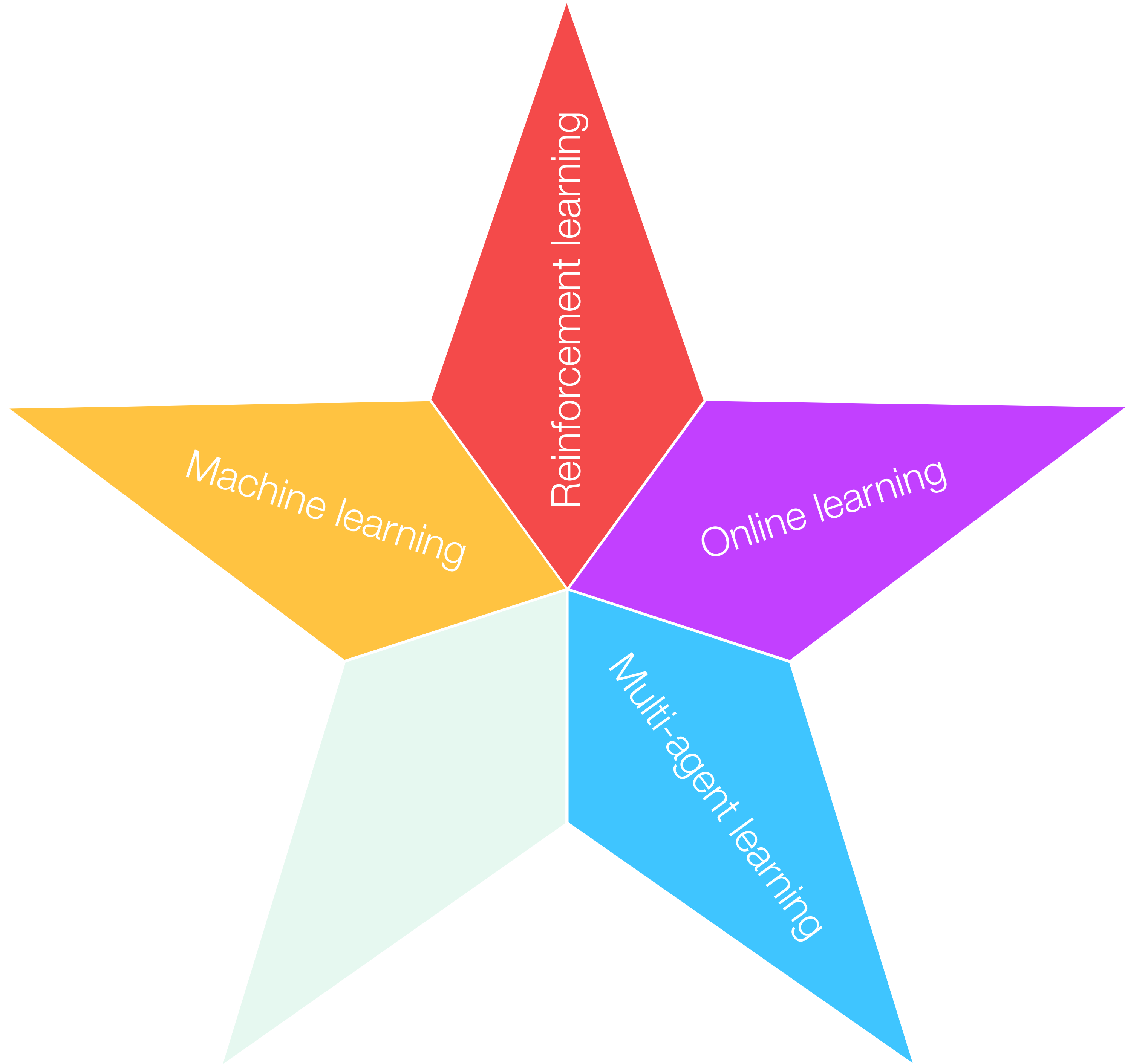




Online learning

- Learning during execution time
- Converge guarantees even in non-stationary environments
- Wide-range applications (e.g., marketing and commerce)

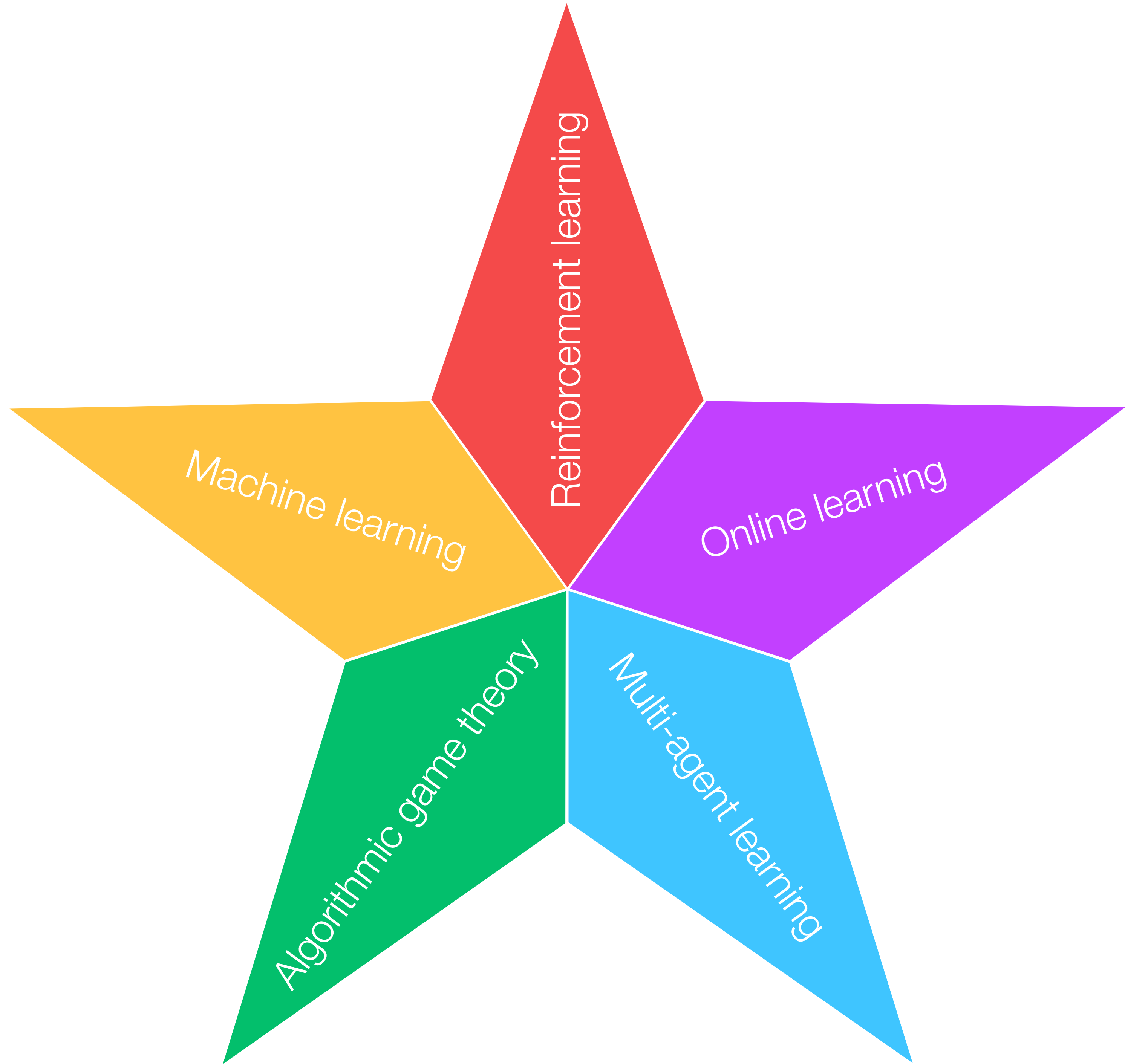




Multi-agent learning

- Decision-making in complex competitive and cooperative scenarios with multiple agents
- Use game theoretical notions of equilibrium to prescribe behavior to agents
- Learn under adversarial environment (usually by online convex optimization)





Algorithmic game theory

- Modeling complex situations with multiple rational entities
- Assessing the complexity of computing optimal solutions
- Applying algorithms to economic settings (e.g., persuasion and contracts)



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Industrial
research

Industrial
deployment

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Industrial
research

Industrial
deployment

Machine learning

Reinforcement learning

Online learning

Multi-agent learning

Algorithmic game theory

AIRIC

ML cube

• Supervisors

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Machine learning

Reinforcement learning

Online learning

Multi-agent learning

Algorithmic game theory

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ML cube

Thesis

Thesis

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Thesis

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Thesis

Thesis

- Description
- Expected starting time
- Expected length
- Co-supervisors

Read the description of the
thesis proposals here



Bid the thesis proposals you
are interested in here



Deadline: September 14, 11:59 pm