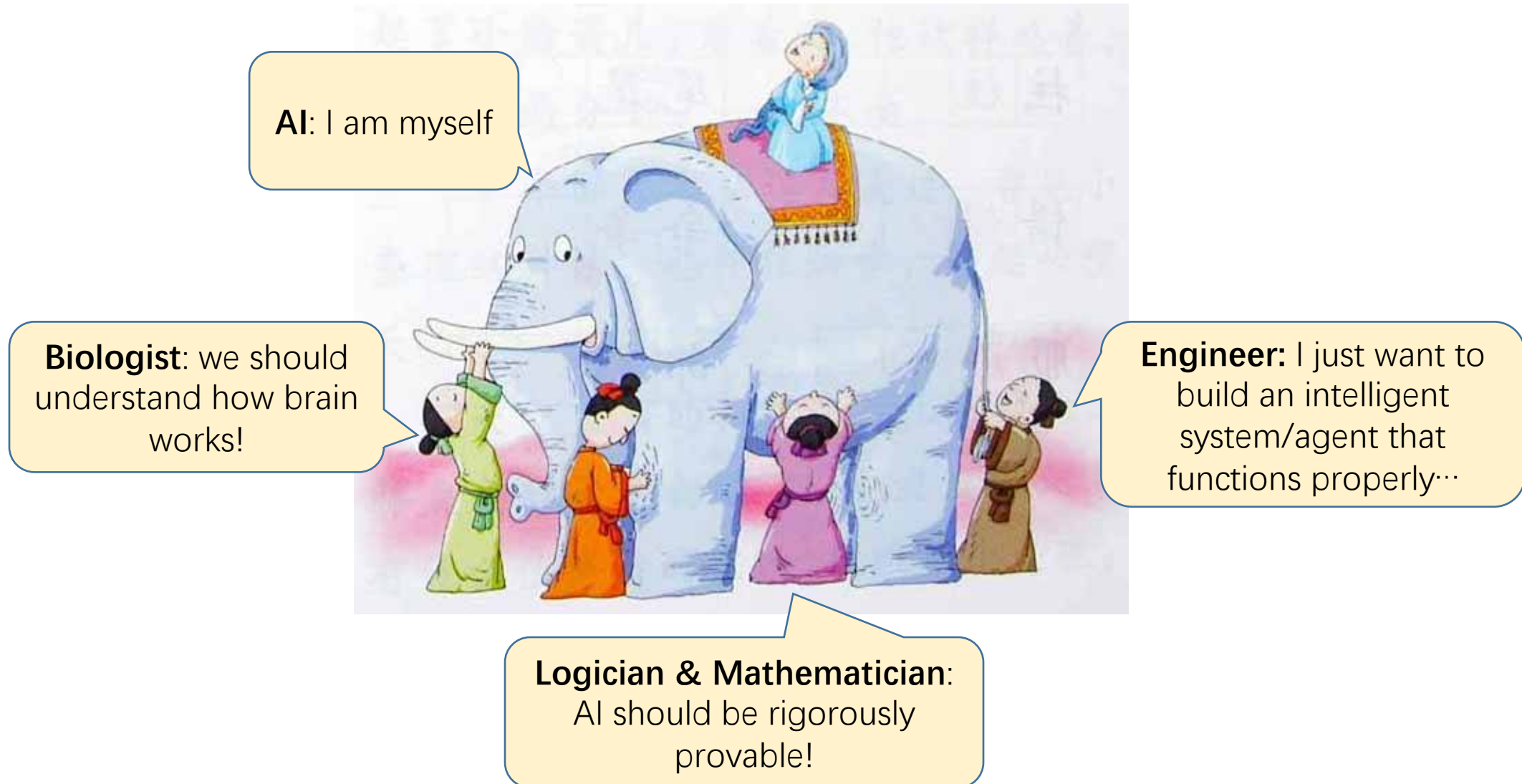# Artificial Intelligence (CS303)
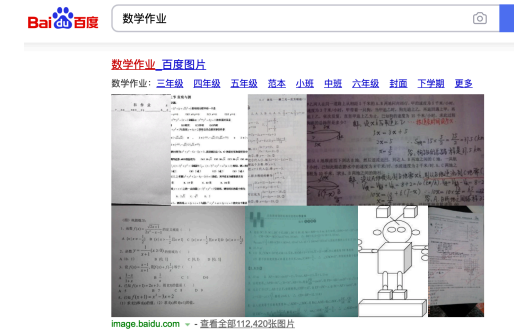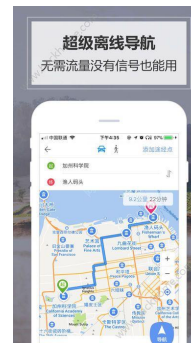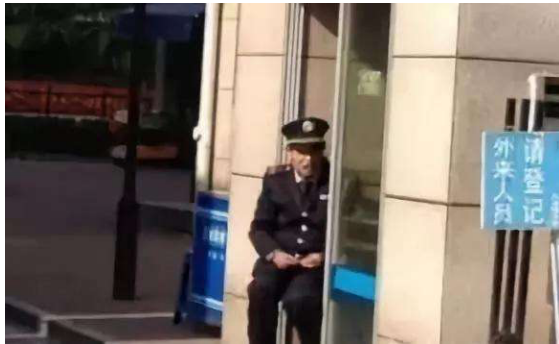
Course Summary

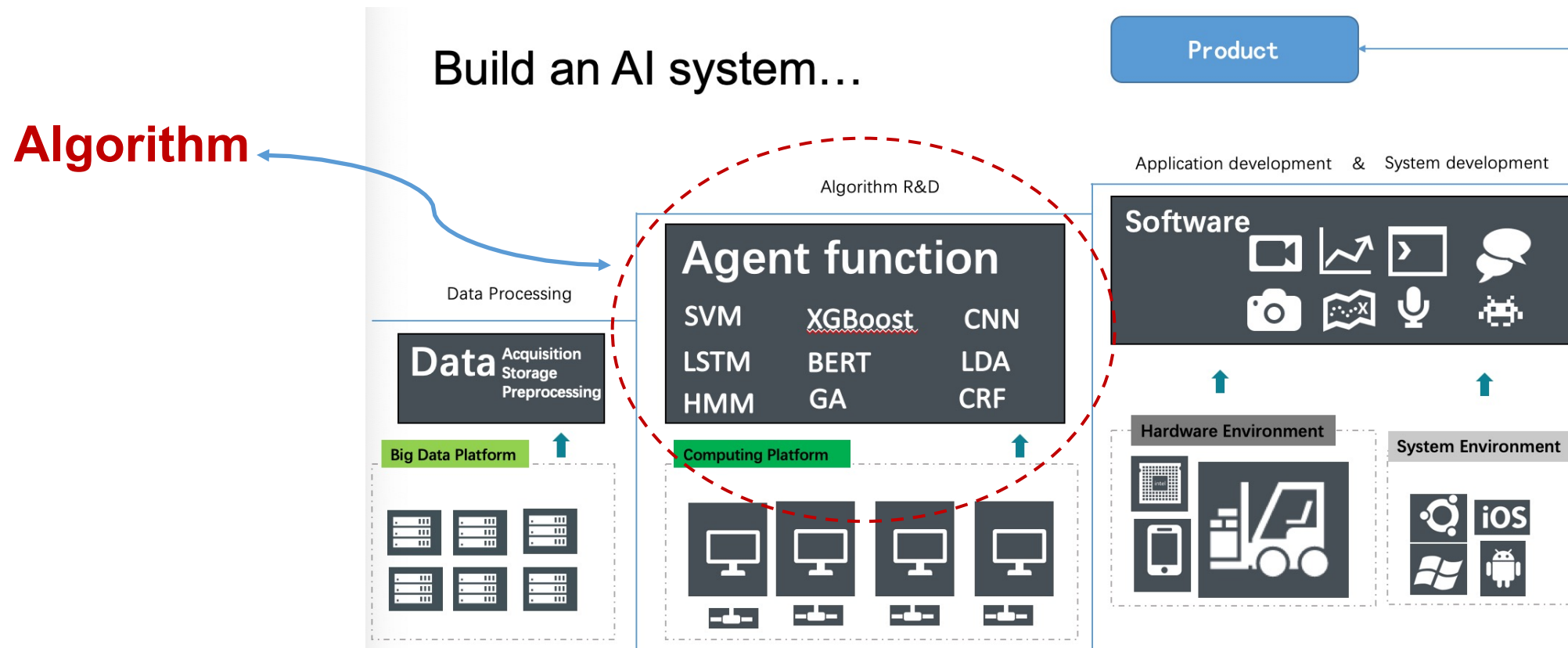# Everybody could say something about AI

AI Could Be Everywhere
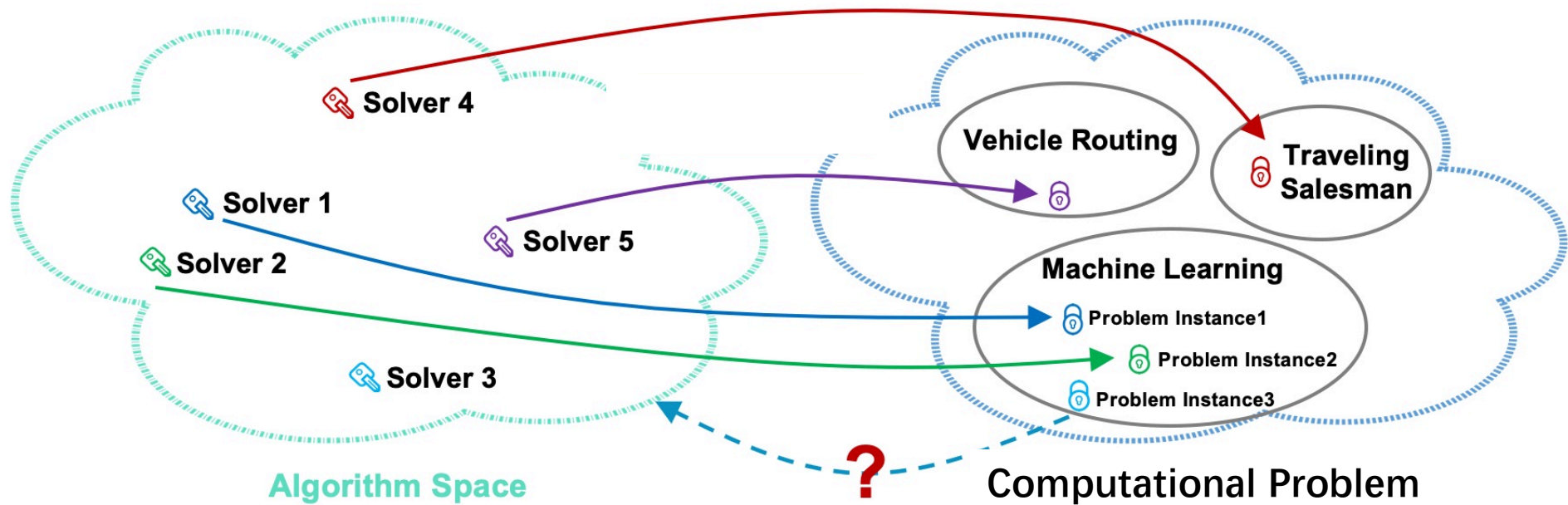
- Making our life easier (more convenient)

What's THIS course about?

- In a nutshell, this course introduce how to design various agent functions.

What's THIS course about?

- AI algorithms for problem solving

What's THIS course about?

- Search: a general paradigm to solve a computational problem

  - what if the search space is discrete?

  - what if the search space is continuous?

  - any methodology to leverage our understanding of the problem to design algorithms?

  - what if the utility/objective function is a "black box"?

What's THIS course about?

- Learning: to gain knowledge/experience from raw data

  - how to represent the form of knowledge (model)?

  - how to evaluate the utility of a model

  - how to gain the model with a learning/training algorithm (a sub-class of search problem)

  - how to learn the knowledge in different context

    - all training data are labeled

    - training data are partially labeled

    - training data are not labeled

    - ...

What's THIS course about?

- Knowledge: to incorporate human knowledge into a computing system, or to make a computing system more comprehensible to human.

  - how to represent human knowledge in a formal language (that could be easily processed by computer).

  - how to use the human knowledge.

Overall Take-home Message

- Repeating is not enough, try to understand, and generalize.

The End of This Course
Thank you for your attendance!