AI Teaching in Schools

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Booklet 1
- Introduction to AI
- AI Basics (I)
- AI Ethical Principles
- Computer Vision (I)
- Computer Speech & Language (I)
- AI and Computer Simulation (I)
- AI in Robotic Reasoning (I)

Booklet 2
- AI Basics (II)
- AI Ethical Issues
- Computer Vision (II)
- Computer Speech & Language (II)
- AI in Robotic Reasoning (II)
- AI and Future of Work (I)
- Societal Impact of AI (I)
- Group Project Design, Development and Presentations (I)

Booklet 3
- Computer Vision (III)
- AI and Computer Simulation (II)
- AI in Robotic Reasoning (III)
- AI and Future of Work (II)
- Societal Impact of AI (II)
- Group Project Design, Development and Presentations (II)

Learning Outcomes

- Explain the major components of AI.

- Explain how AI process data in different types of perception

- Design and create Machine Learning

- Recognise how AI applications impact our everyday and future living.

- Evaluate how ethical and moral an AI application is

- Learn / work with GenAI

Classifying Skills (Analysis)
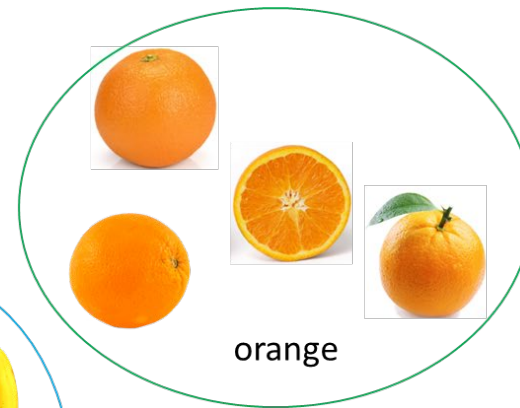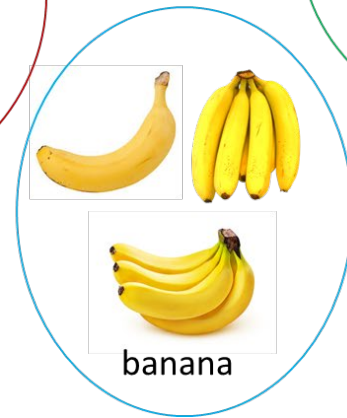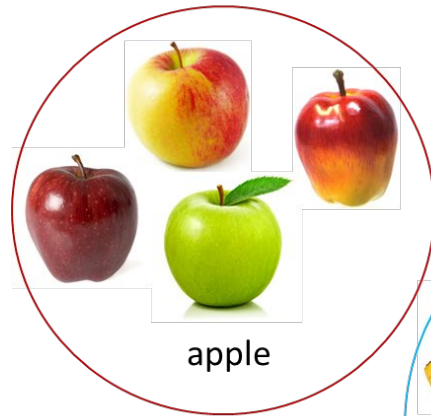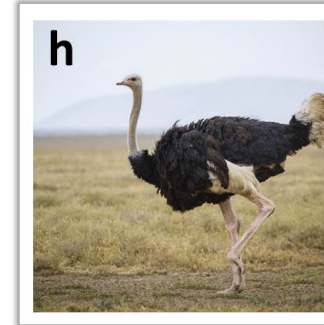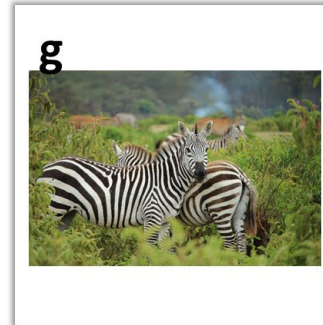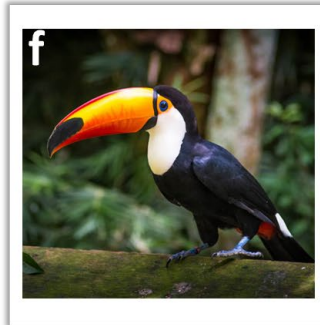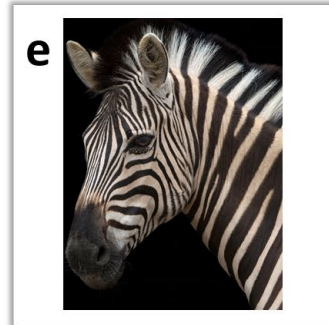
Classifying Skills (Analysis)

*Rule #1: If the car is moving at slow speed ≤ 20km/h and at a short*

       distance < 10m away from the traffic light, then apply half-braking;

Rule #2: If the car is moving at slow speed ≤ 20km/h and is at a long

       distance ≥ 10m away the traffic light, then apply no braking;

Rule #3: If the car is moving at high speed > 20km/h and is at a short

       distance < 10m away from the traffic light, then apply full-braking;

Rule #4: If the car is moving at high speed > 20km/h and is at a long

       distance ≥ 10m away from the traffic light, then apply half-braking;

Classifying Skills (Analysis)
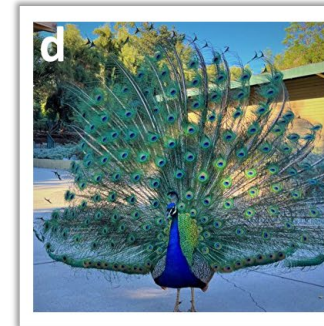
Generalising Skills

Classifying → Generalising skills

- Features
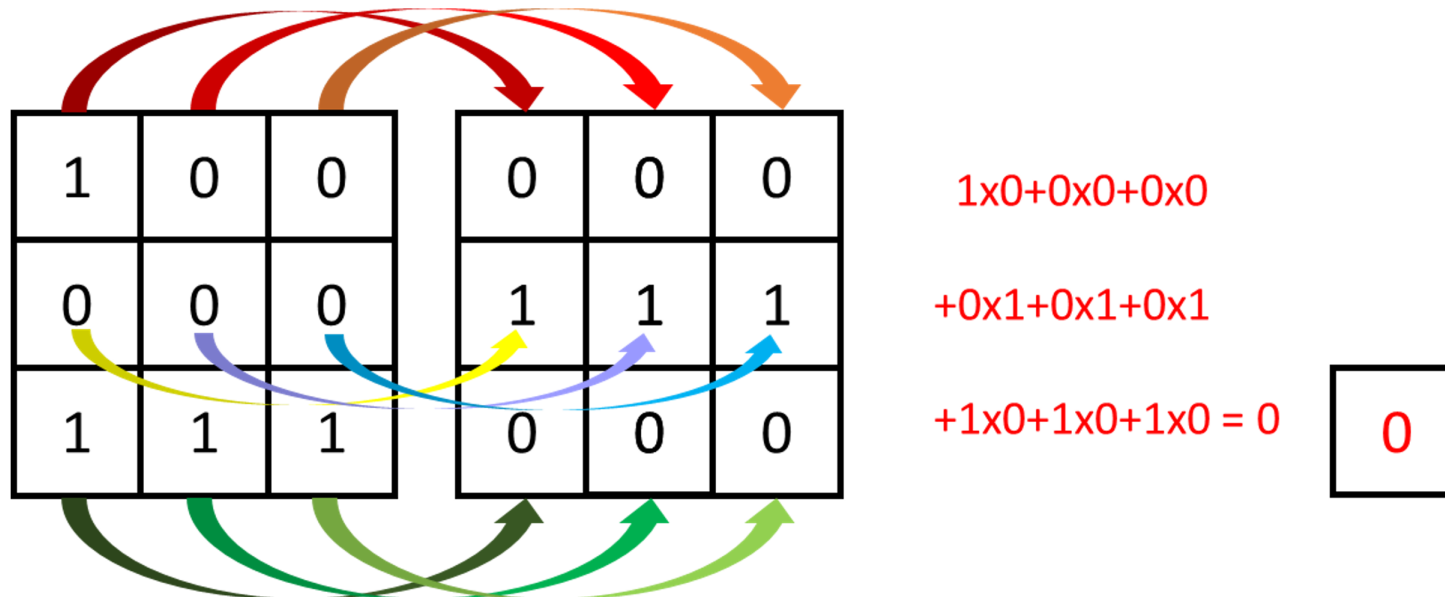- Conditions
- Colours
- Etc.

Interdisciplinary Teaching

Step 3: Perform Convolution

Next, please convolve each image patch with the filter like in Figures 1.7, 1.8, 1.9 and 1.10.

1x0+0x0+0x0

+0x1+0x1+0x1

+1x0+1x0+1x0 = 0

0

Ethical Thinking

Disciplinary Knowledge

Disciplinary Knowledge

Explicit AI Thinking
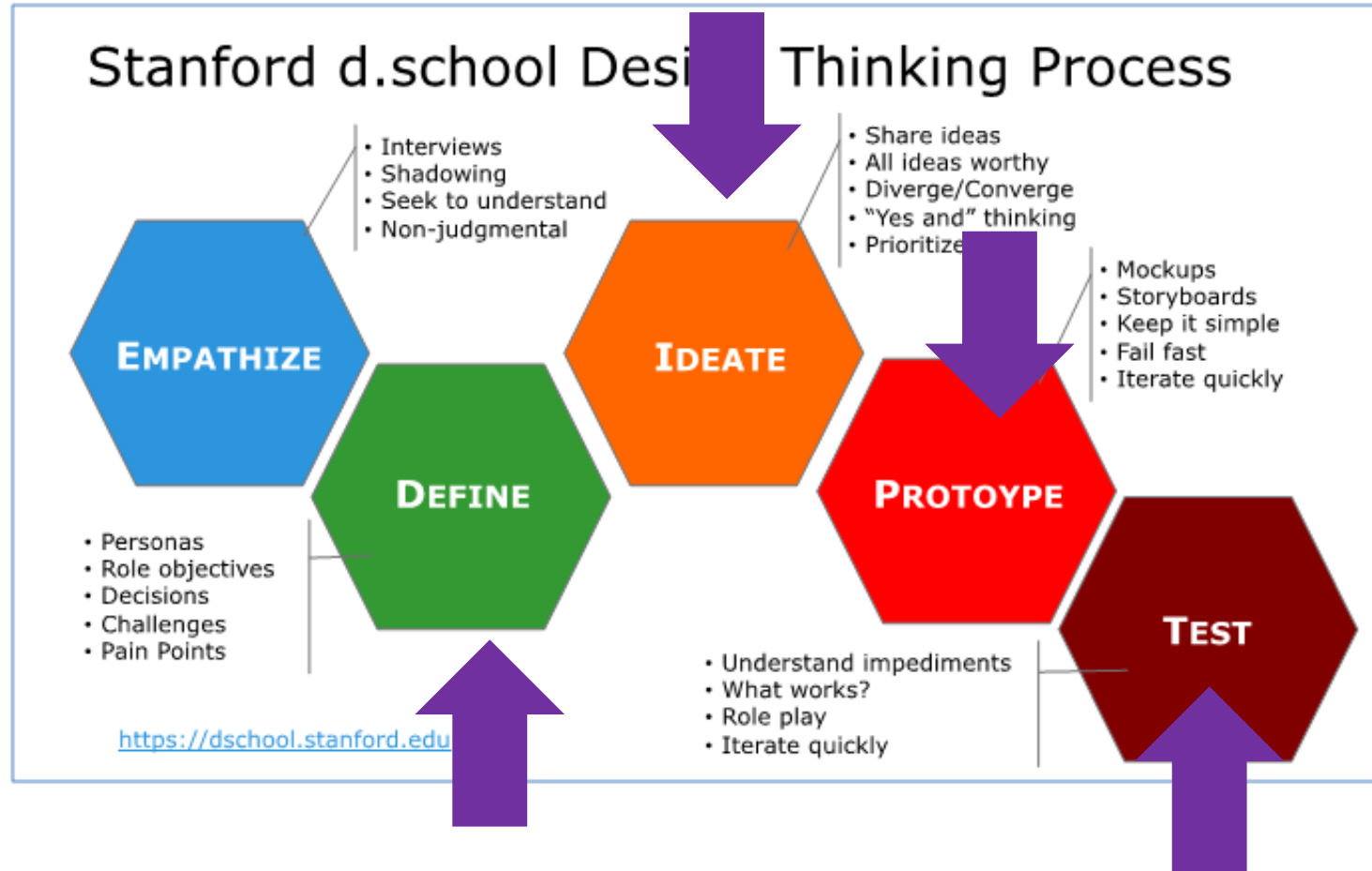
Ethical Attitude / Thinking

Ryan, M., Antoniou, J., Brooks, L., Jiya, T., Macnish, K., & Stahl, B. (2021). Research and practice of AI ethics: a case study approach juxtaposing academic discourse with organisational reality. *Science and Engineering Ethics*, *27*, 1-29.
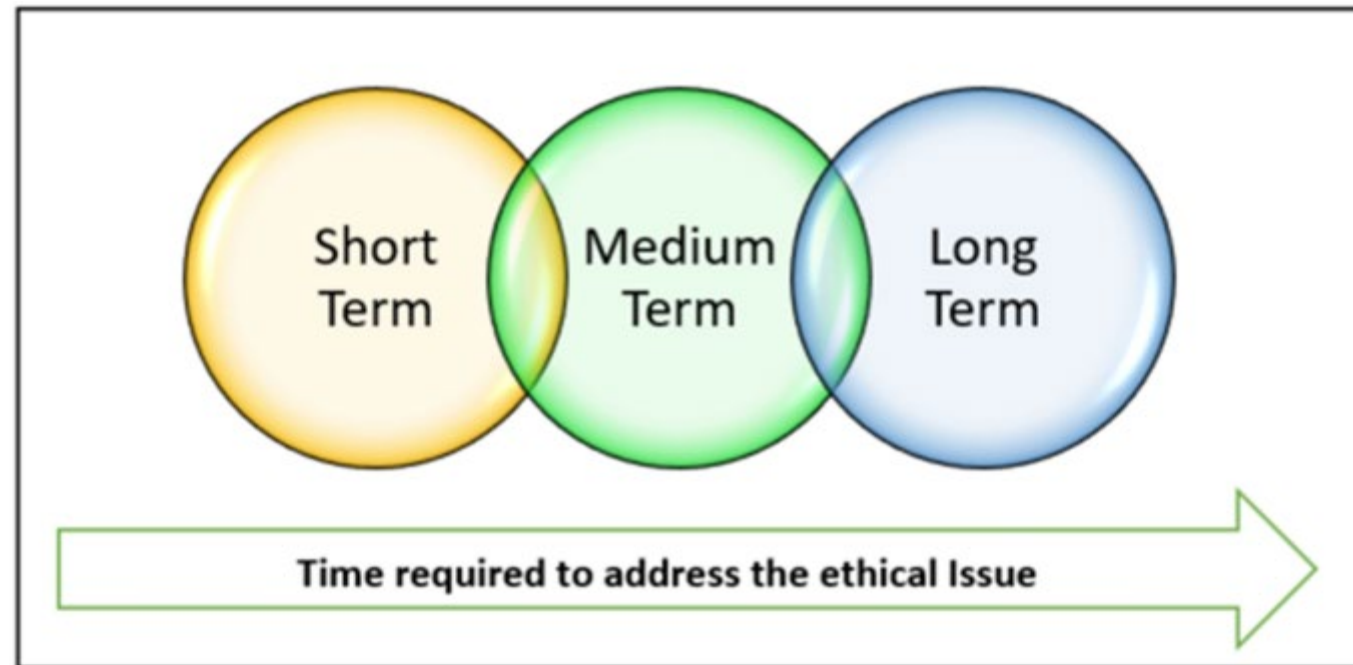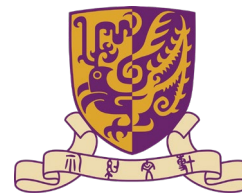
Topic

- Privacy risk due to AI doctors
- Privacy risk due to AI tutors
- Emotional Diagnosis using CV and computer Speech
- Pros and cons of student academic prediction system
- Rights and protection of AI copyrighted art works and creations

Discuss Ethical Issue In Machine Learning

Thank You

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