

CSE4261: Neural Network and Deep Learning

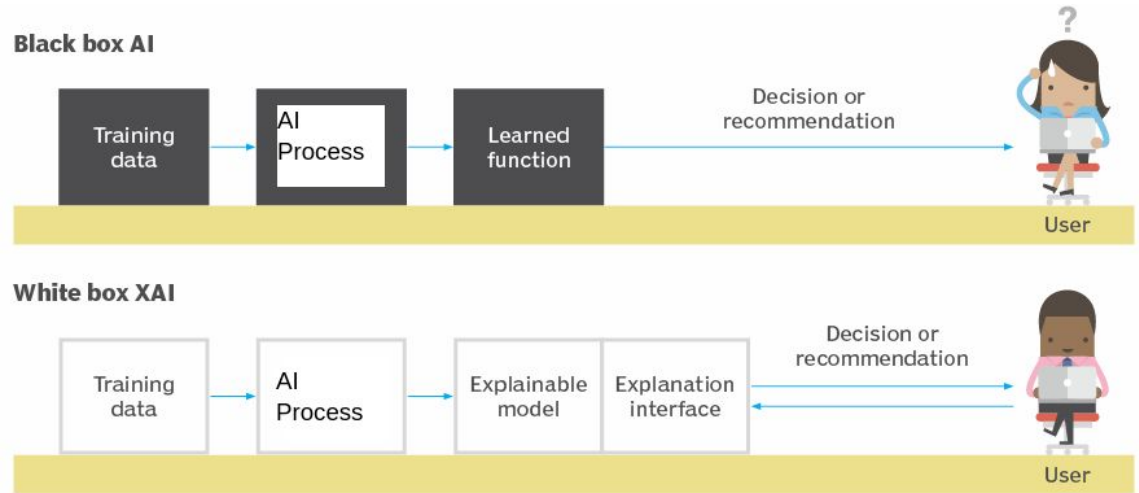
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Explainable AI (XAI)

- It makes the decision-making processes of AI models understandable and transparent to users.
- It tries to reduce/remove AI's "black box" stigma.
- It helps users to build trust in an AI system and its outputs, leading to greater acceptance and adoption.



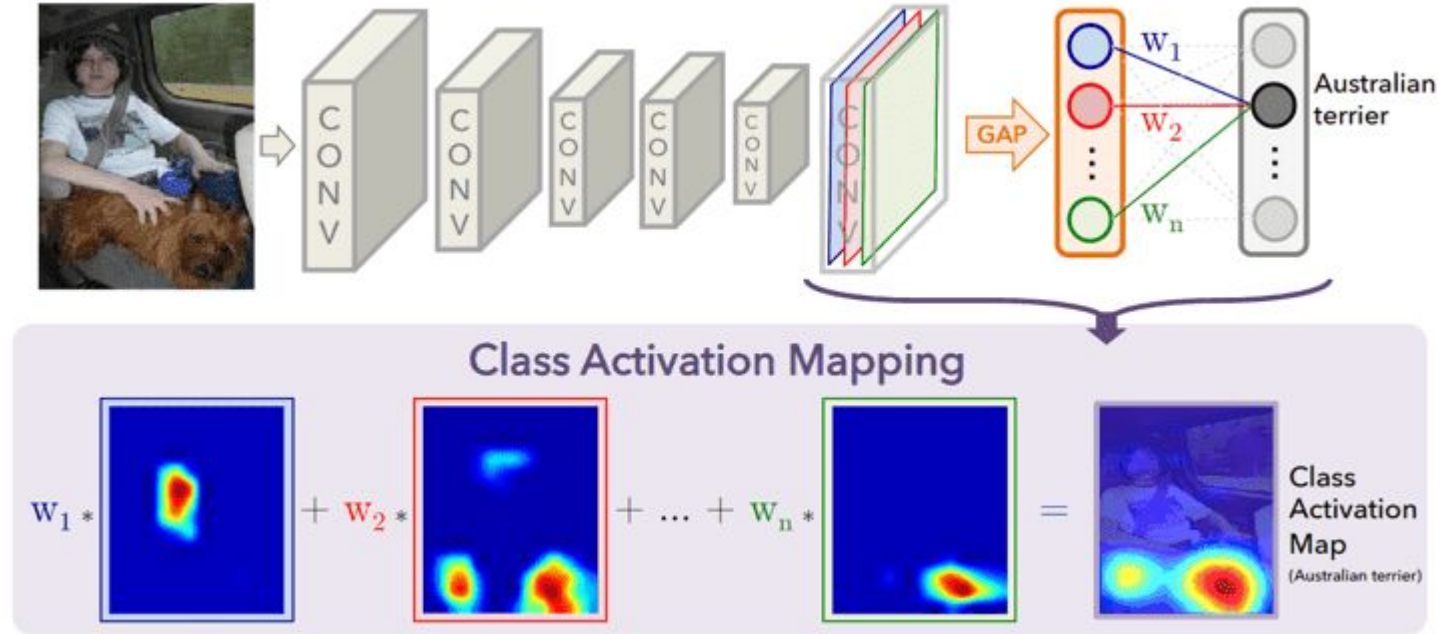
Further Reading: <https://www.ibm.com/think/topics/explainable-ai>

Some XAI Techniques for Computer Vision

- CAM: Class Activation Mapping
- Grad-CAM: Gradient weighted CAM
- IG: Integrated Gradients

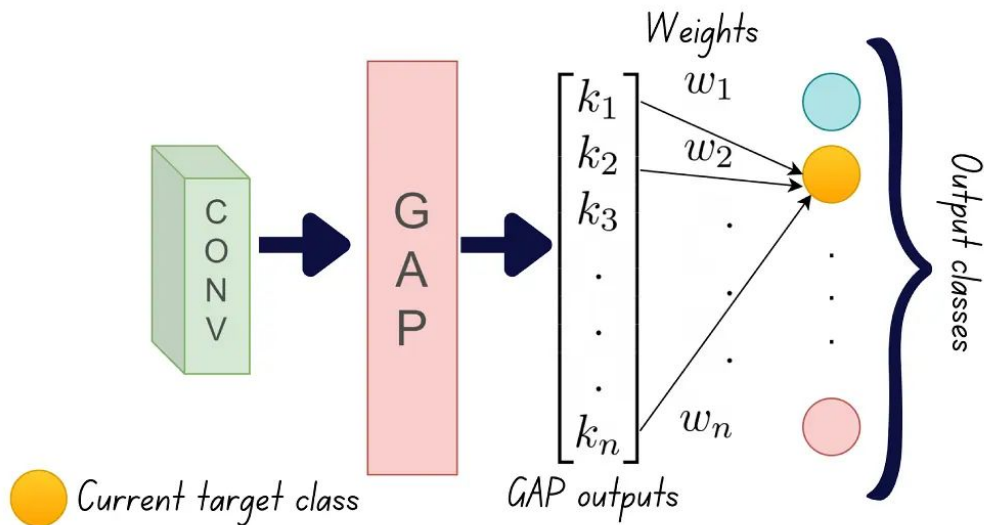


CAM (Class Activation Mapping)



Architecture Necessary for CAM

- GAP layer is necessary
- Generally one dense layer is expected after the GAP layer.
 - CAM can be also used for model with multiple dense layers



Grad-CAM



Grad-CAM



https://keras.io/examples/vision/grad_cam/?source=post_page----1ef69aae8fe7-----

Grad-CAM (Gradient weighted CAM)

