

Interpretability
through Explanations



• Explain one prediction at a time

• Explanations are usually **inference** created (~alien map)

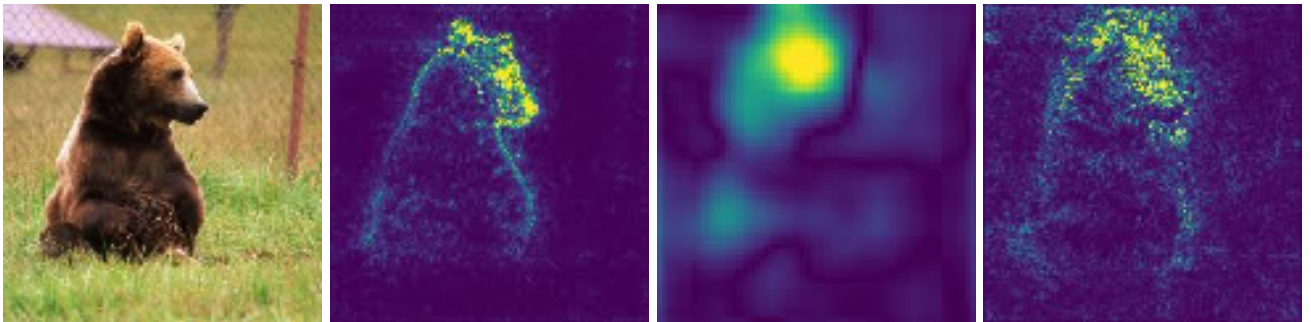
• Two main approaches to estimate influence:

• **Parental Contributions**

• Gradients/Relevance Propagation



[Ribbeiro et al., 2016]



[Hara et al., 2018]

$\leq 50K$

$> 50K$

Capital Gain > 0.00
0.46
Marital Status=Marri...
0.18
Education-Num > ...
0.12
Hours per week > ...
0.09

[Ribeiro et al., 2016]

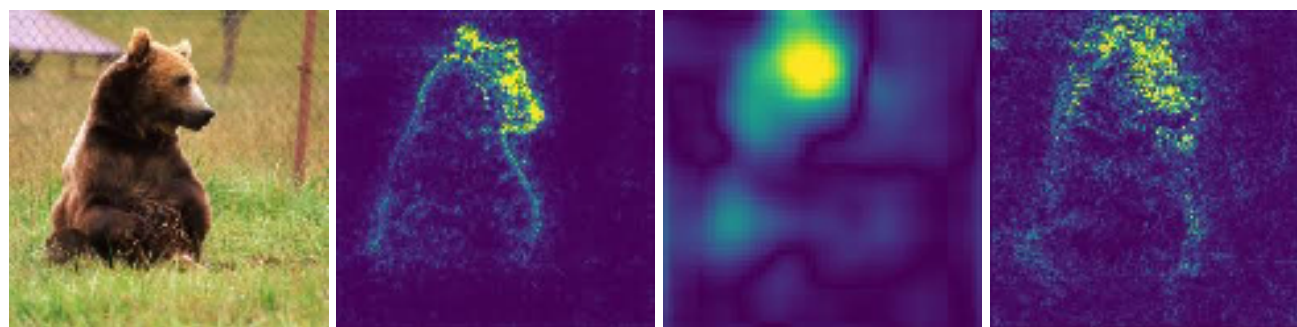
It is the **body**'s reaction to a strange
partly to physical **discomfort** and part
more prone to it than others, like some
on a roller coaster **ride** than others.
a lack of clear indication of which way
normally oriented with its **cargo** bay po
(or ground) is "above" the head of the
experience some form of motion **sickness**
space to try to see how to keep the num

[Arras et al., 2017]

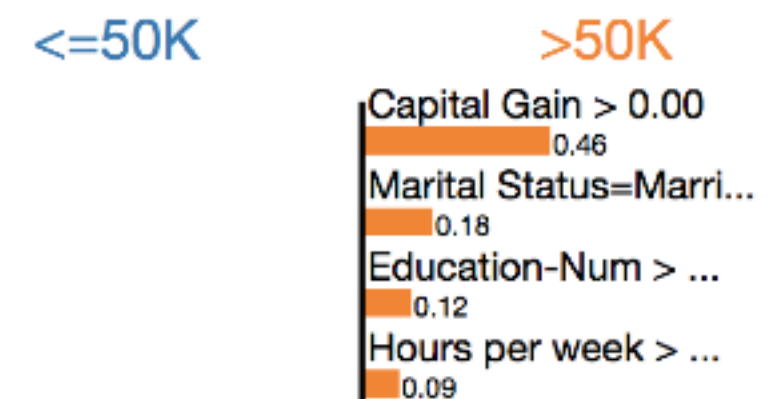
Both require computation "after-the-fact":
post-hoc interpretability

Interpretability through Explanations

- Explain **one** prediction at a time
- Explanations are usually **influence scores** (~saliency maps)



[Hara et al., 2018]



[Ribeiro et al., 2016]

It is the **body's** reaction to a strange partly to physical **discomfort** and part more prone to it than others, like some on a roller coaster **ride** than others. a lack of clear indication of which way normally oriented with its **cargo** bay po (or ground) is "above" the head of the **experience** some form of motion **sickness** **space** to try to see how to keep the num

[Arras et al., 2017]

- Two main approaches to estimate influence:
 - Perturbations
 - Gradients/Relevance Propagation

Both require computation "after-the-fact":
post-hoc interpretability

Interpretability through **Explanations**