## Classification with Costly Features using Deep Reinforcement Learning



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## Dulac-Arnold et al. (2011) used RL

since then, no RL

Xu et al. (2012, 2013), Kusner et al. (2014), Wang et al. (2013, 2014), Nan et al. (2015, 2016, 2017), ...

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## Objective

$$egin{aligned} & y_{ heta}(x) o ext{class} & z_{ heta}(x) o ext{cost} \ & J = \mathbb{E}\left[\ell(y_{ heta}(x),y) + \lambda z_{ heta}(x)
ight] \end{aligned}$$

Objective

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$$J = \mathbb{E}\left[\ell(y_{ heta}(x), y) + \lambda z_{ heta}(x)
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Results



## **Questions?**

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🖸 github.com/jaromiru/cwcf