

CAsToR Pilot Project Program Lightning Talk Sessions

Automating the detection of American adolescents at risk of e-cigarette dependence using machine learning

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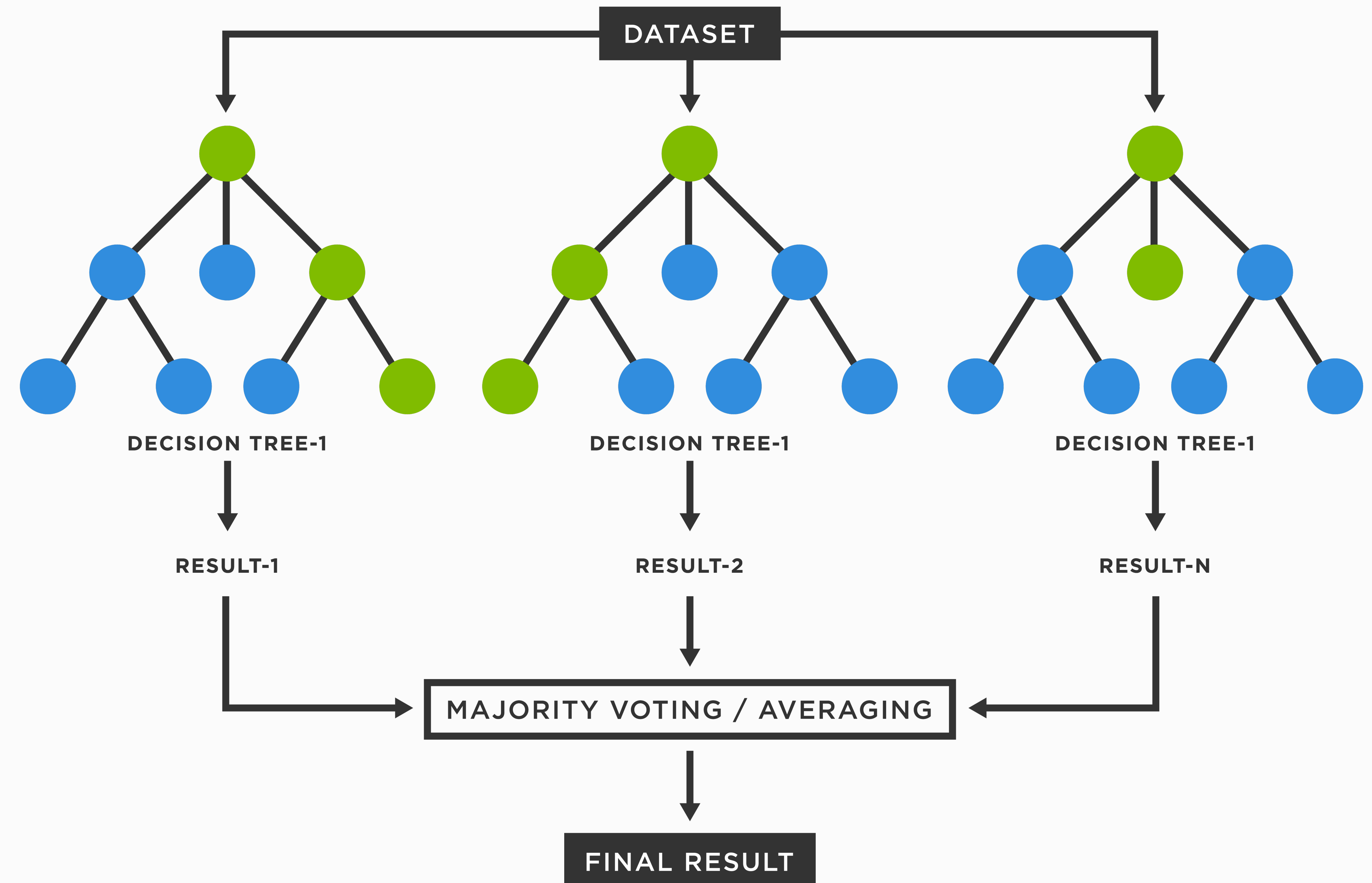
Acknowledgments

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Random forests

- Model development
- Variable importance
- Intersectionality



Top predictors of frequent vaping

↑ Past30d nicotine concentration in vape

100

↑ Past30d daily vaping sessions

96.7

↑ Hooked on Vaping Checklist score

95

↑ Willingness to vape

94.7

↑ Past30d puffs per vape

91.2

↑ Perceived discrimination (EDDS)

89.7

↓ Cigarette smoking expectancies

88.4

✓ Past30d nicotine-containing vaping

86.1

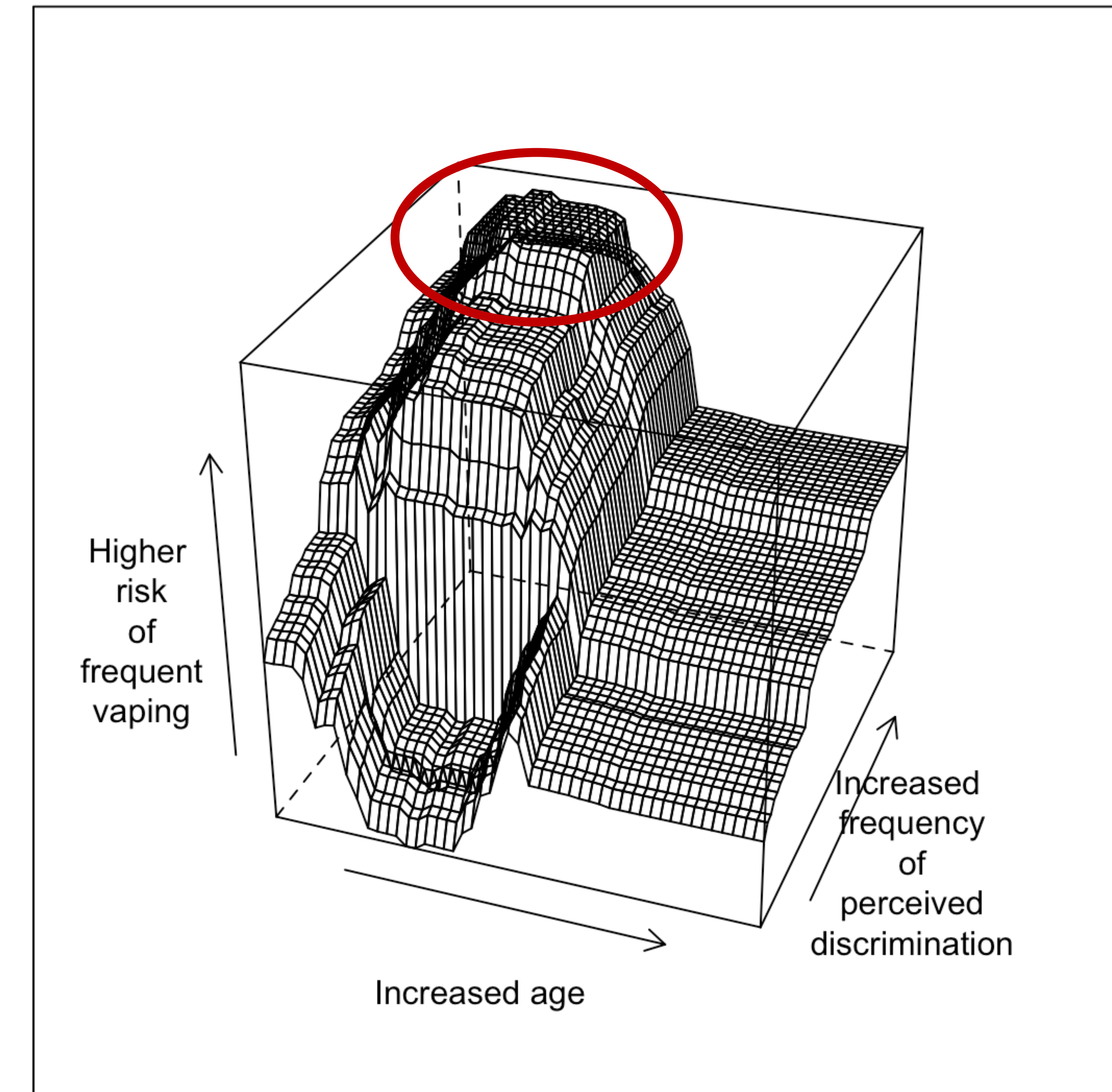
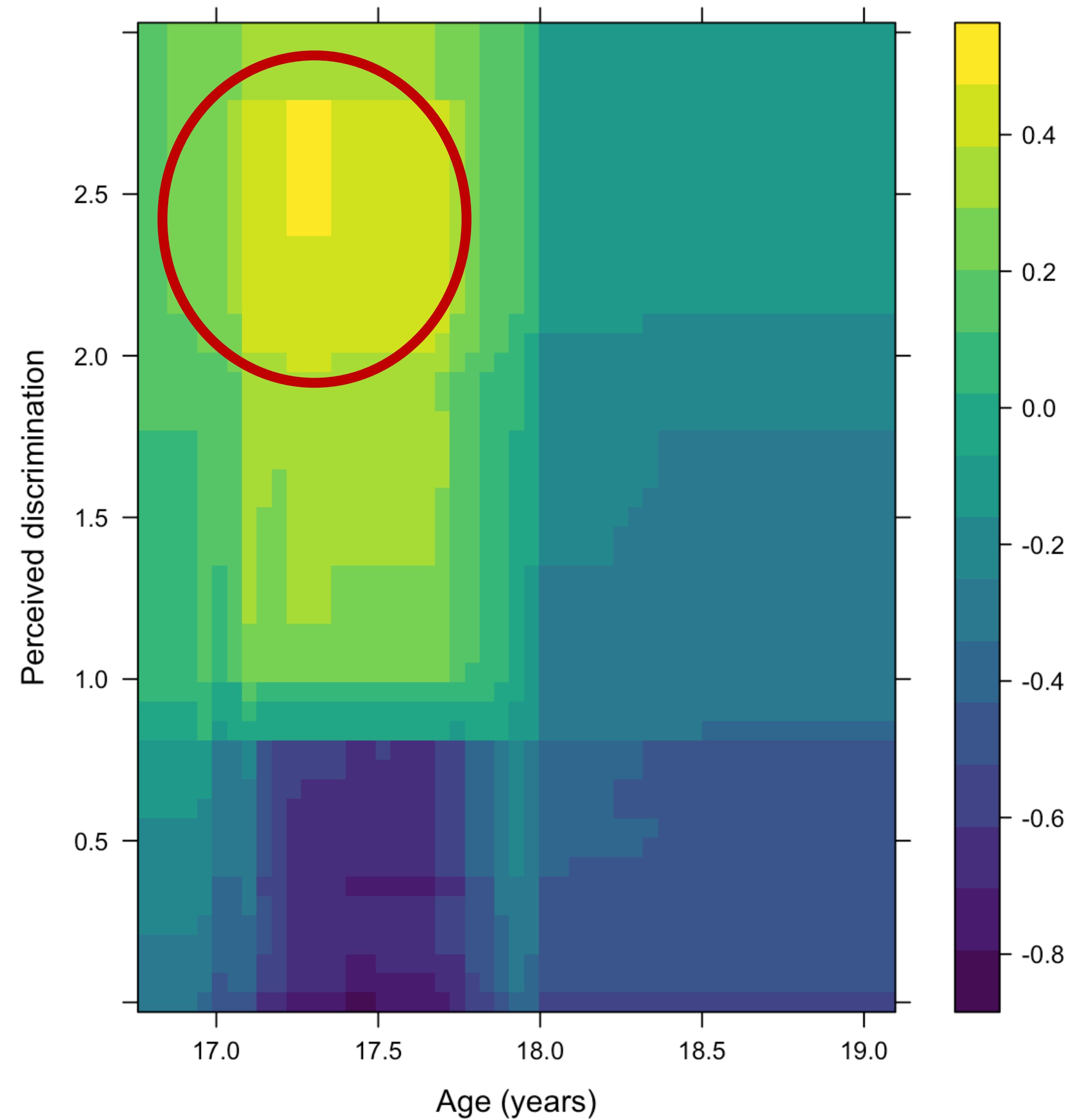
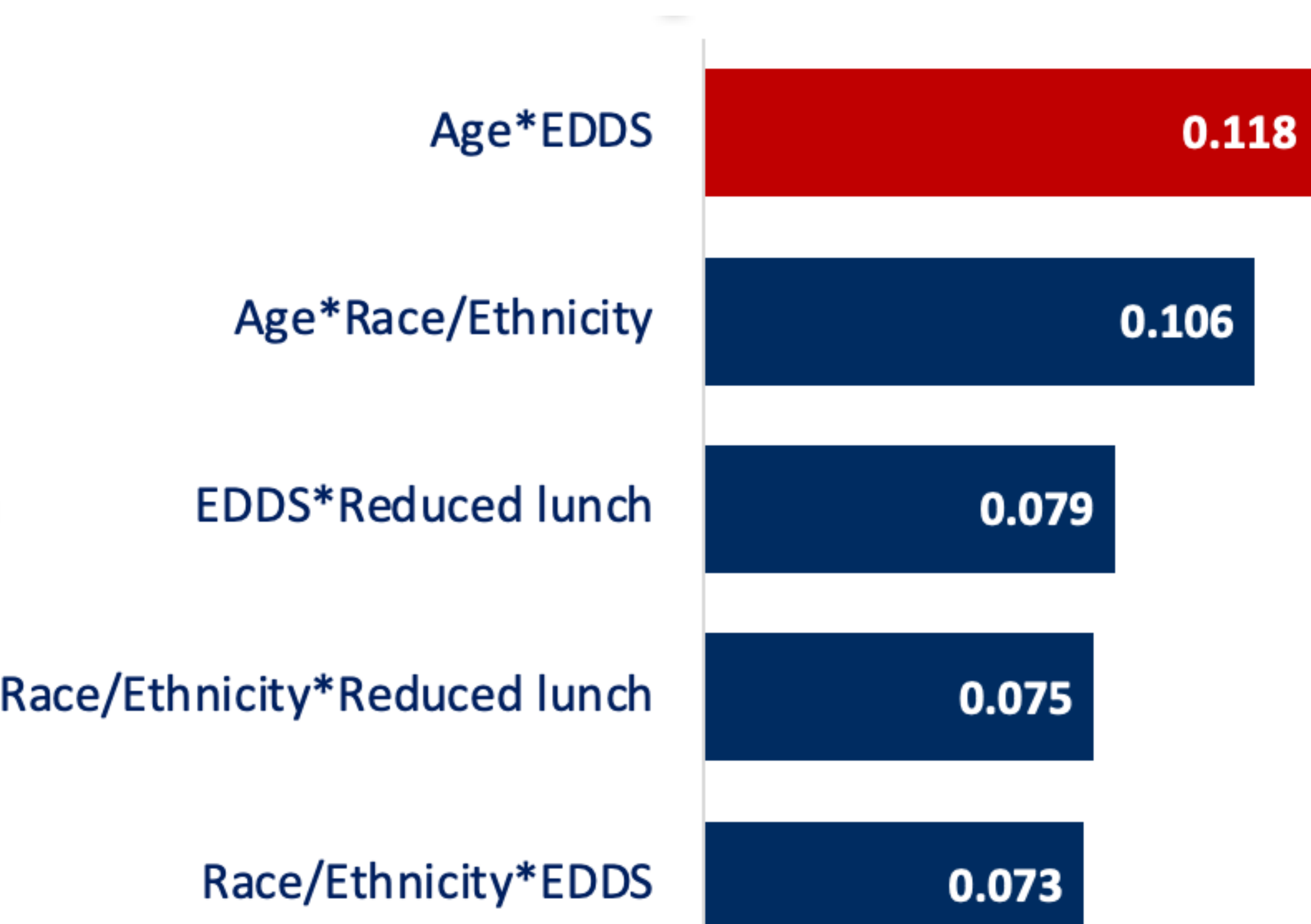
↑ Reduced-cost lunch students at school

85

✓ Past30d marijuana vaping

82.9

Intersectionality



Future directions

- Automation
- Capture progression in vaping
- Real-world implementation