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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Random forests

Model development Variable importance Intersectionality

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DATASET **DECISION TREE-1 RESULT-2** MAJORITY VOTING / AVERAGING FINAL RESULT







Top predictors of frequent vaping

↑ Past30d nicotine concentration in vape ↑ Past30d daily vaping sessions ↑ Hooked on Vaping Checklist score ↑ Willingness to vape ↑ Past30d puffs per vape ↑ Perceived discrimination (EDDS) \downarrow Cigarette smoking expectancies ✓ Past30d nicotine-containing vaping ↑ Reduced-cost lunch students at school ✓ Past30d marijuana vaping

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Intersectionality



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Future directions

Automation • Capture progression in vaping Real-world implementation

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