

Detecting Photoshopped Faces by Scripting Photoshop

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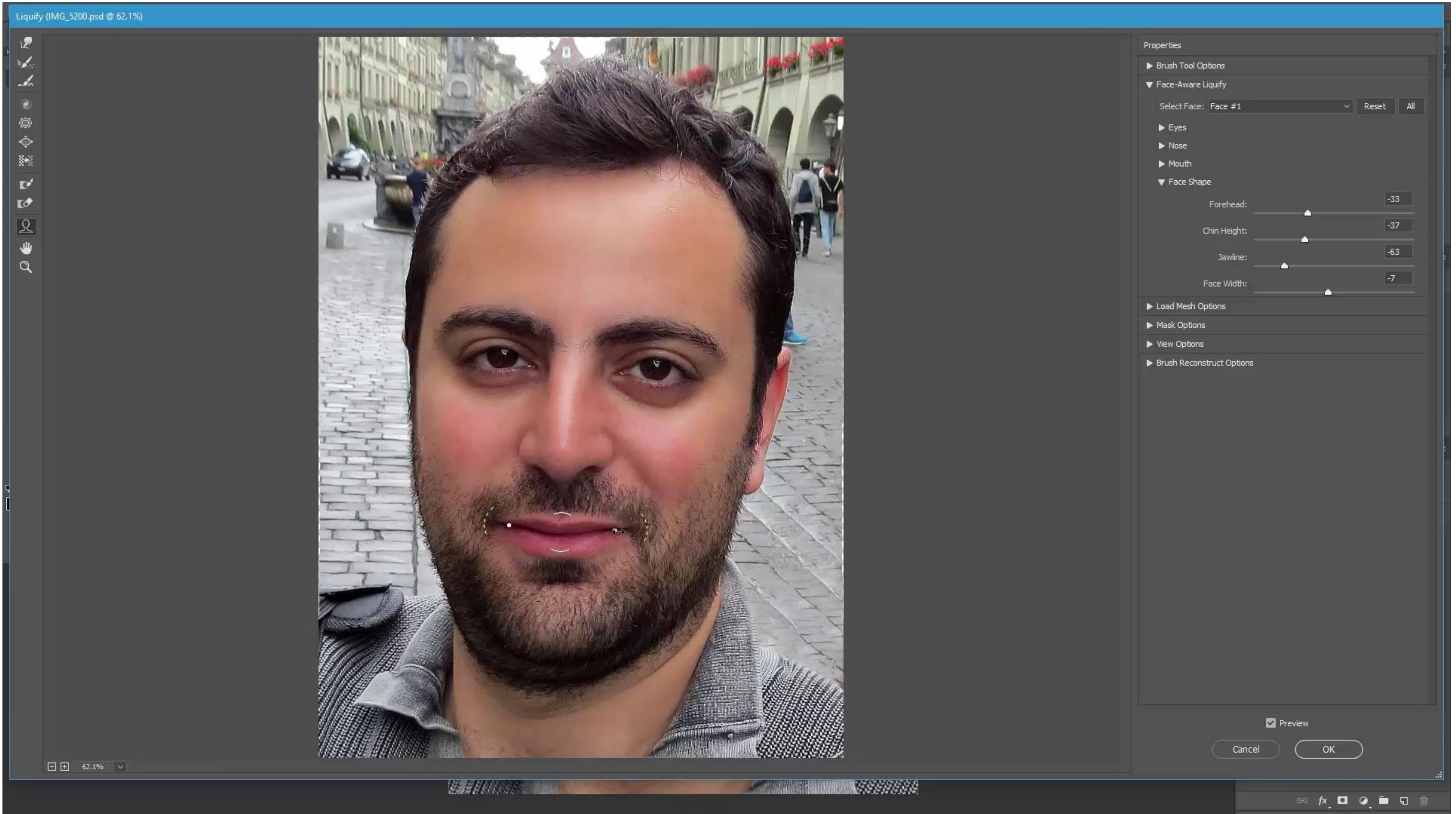
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UC Berkeley¹ Adobe Research²

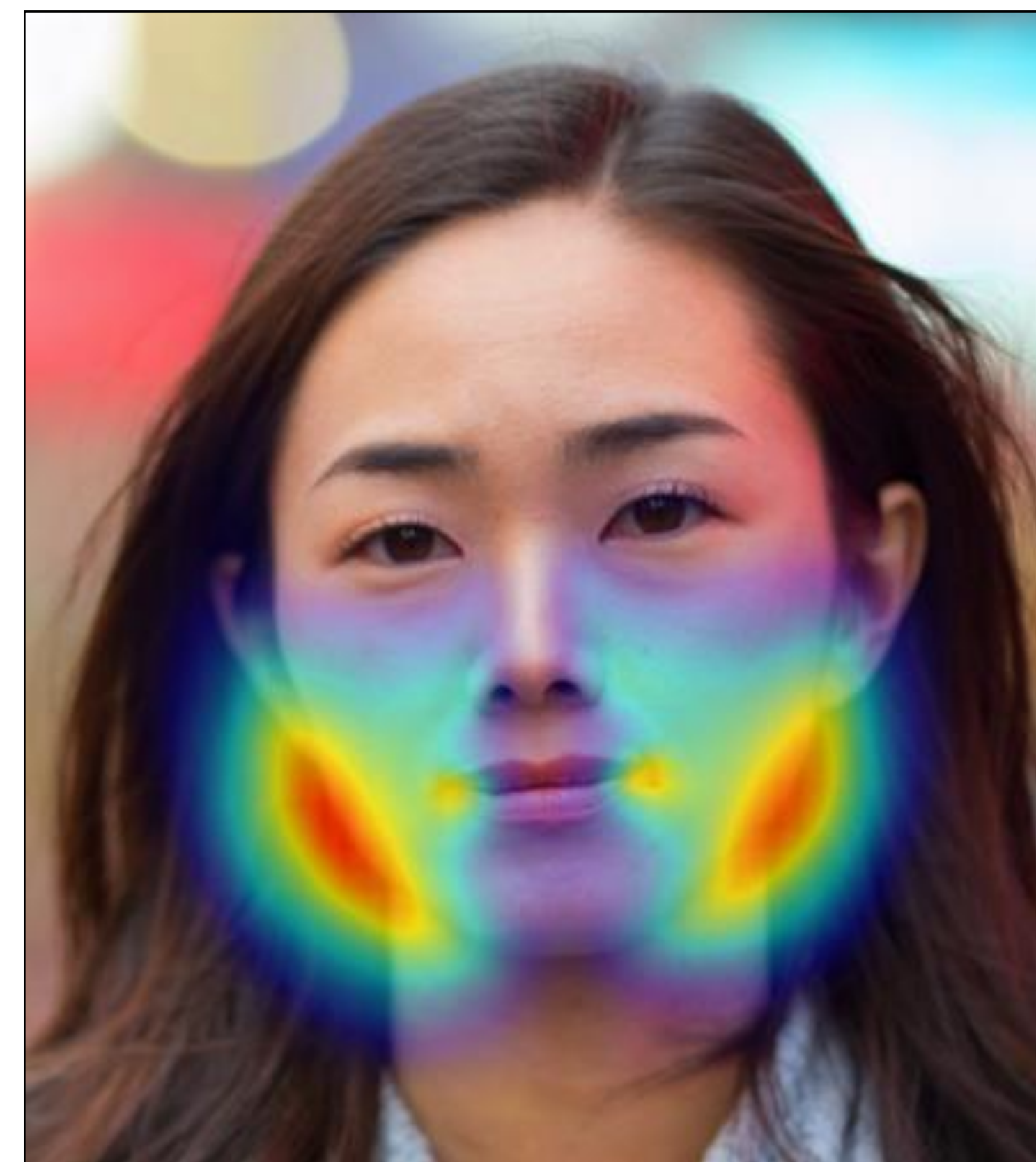
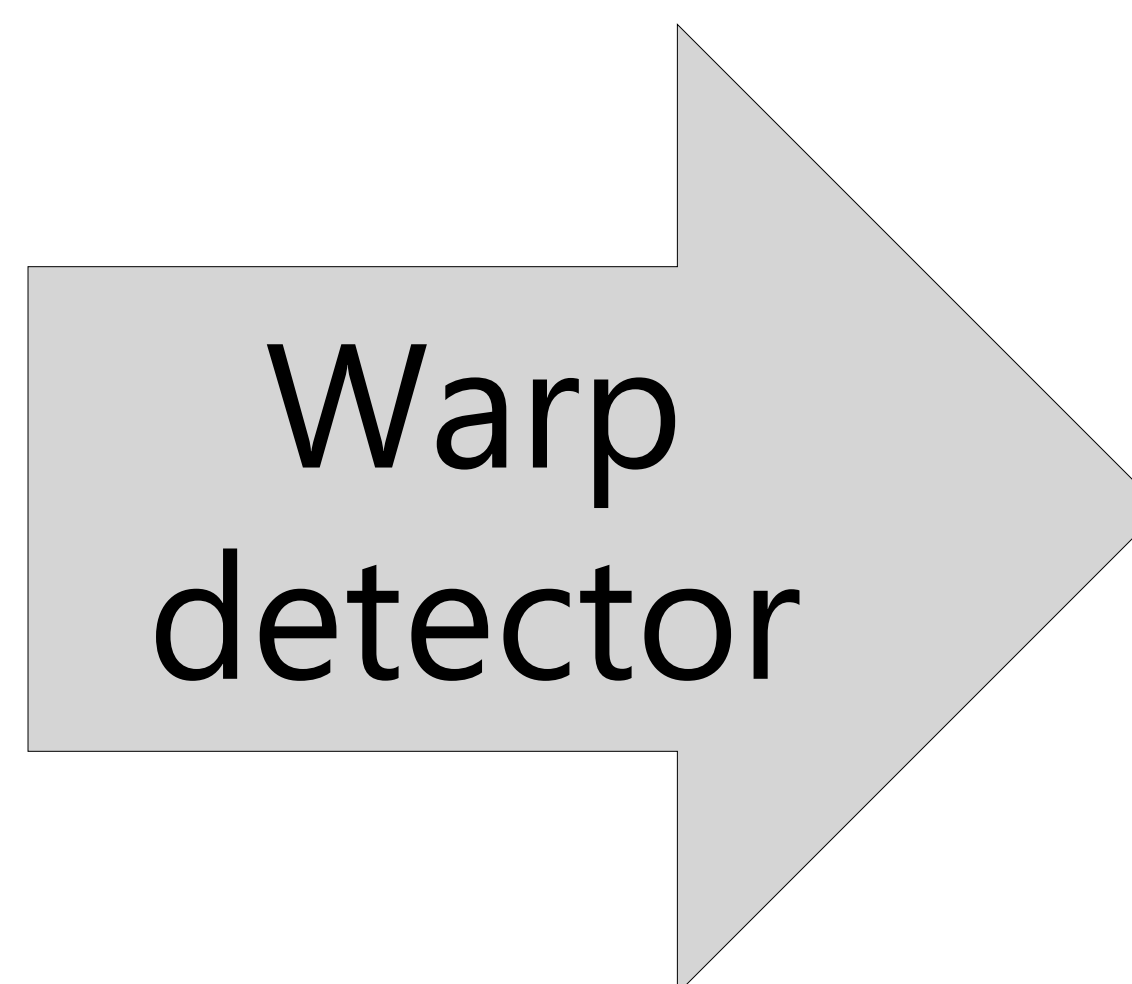


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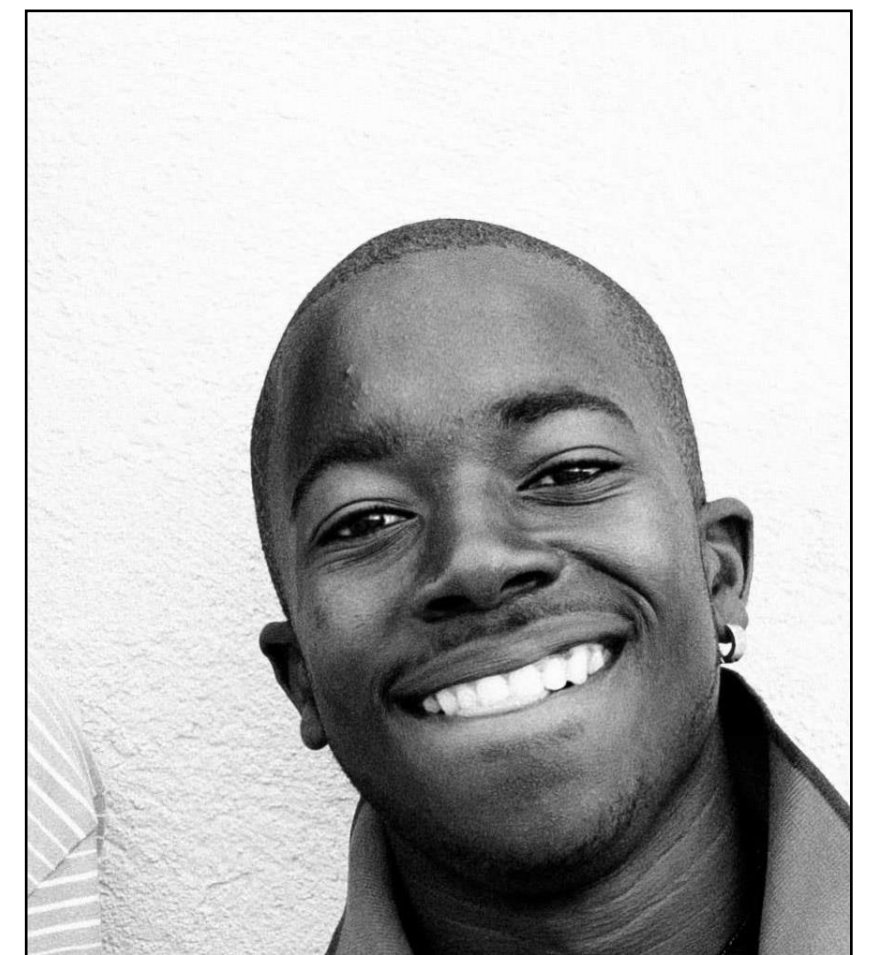
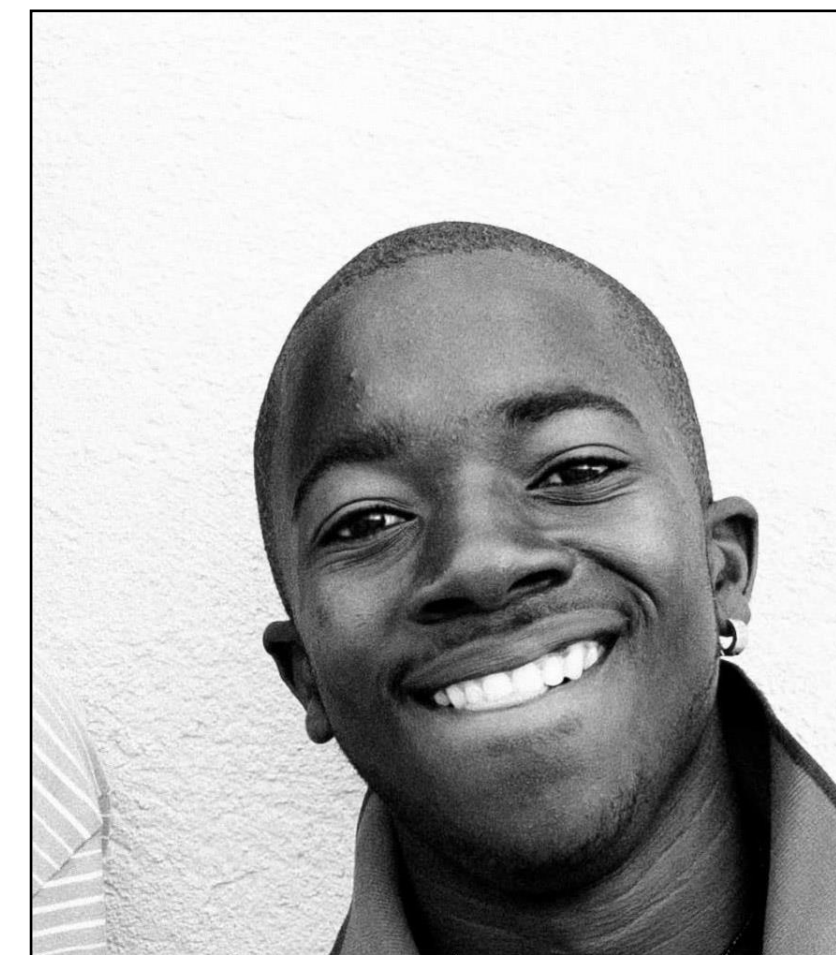
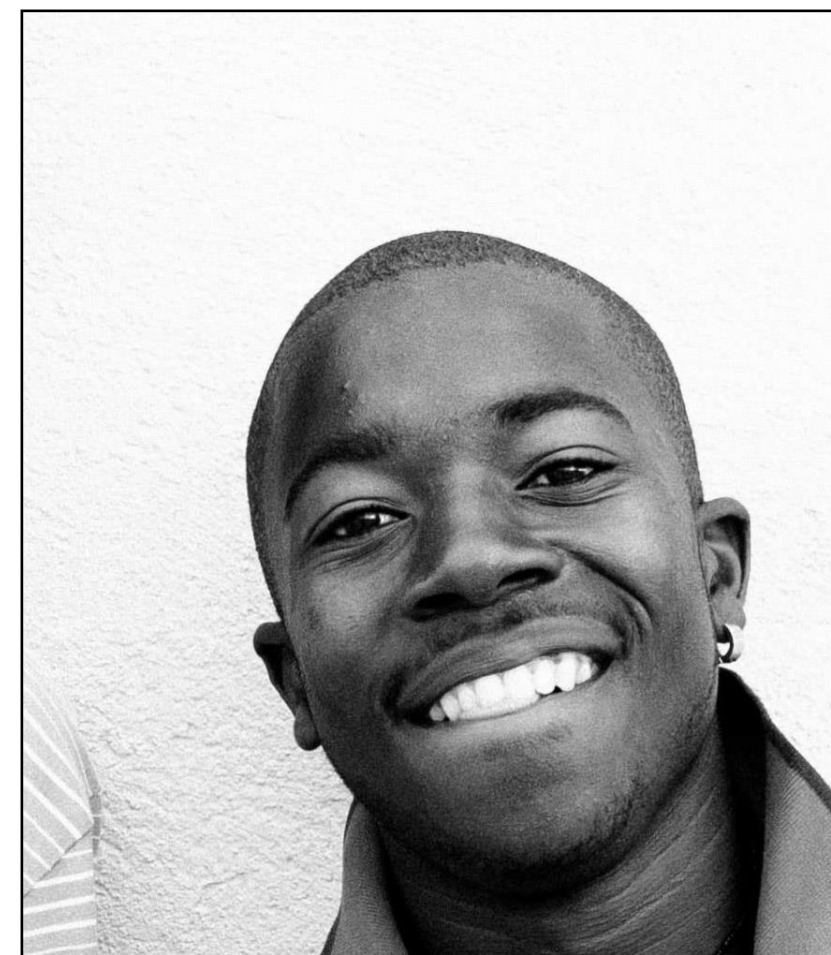
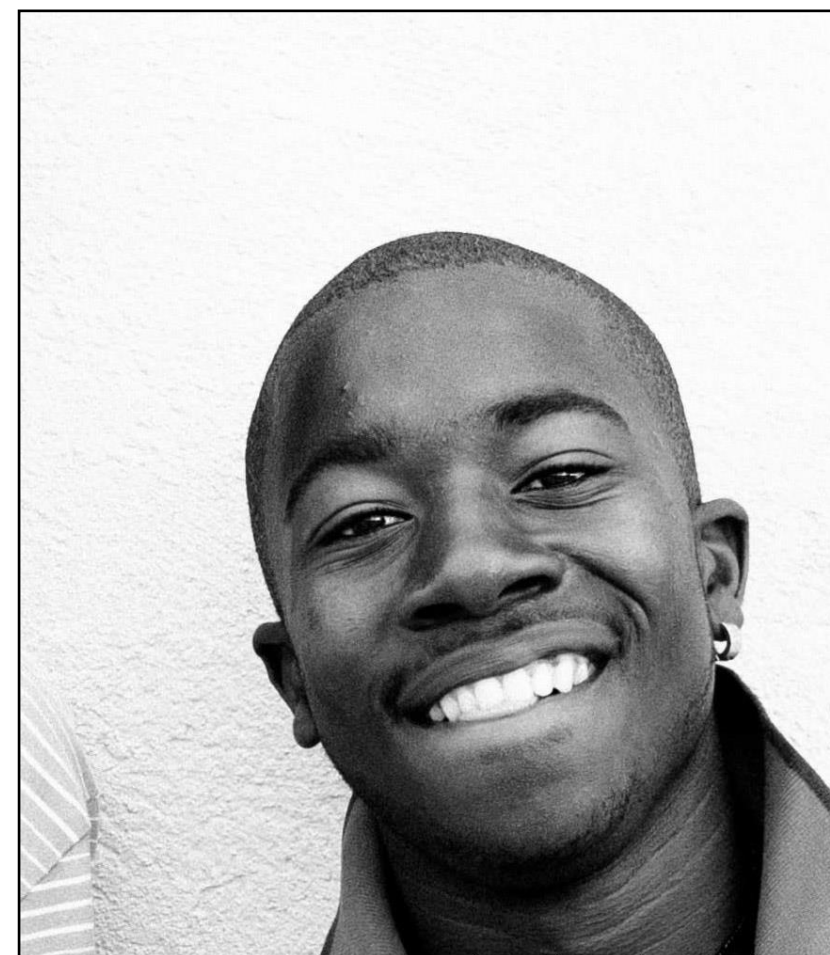
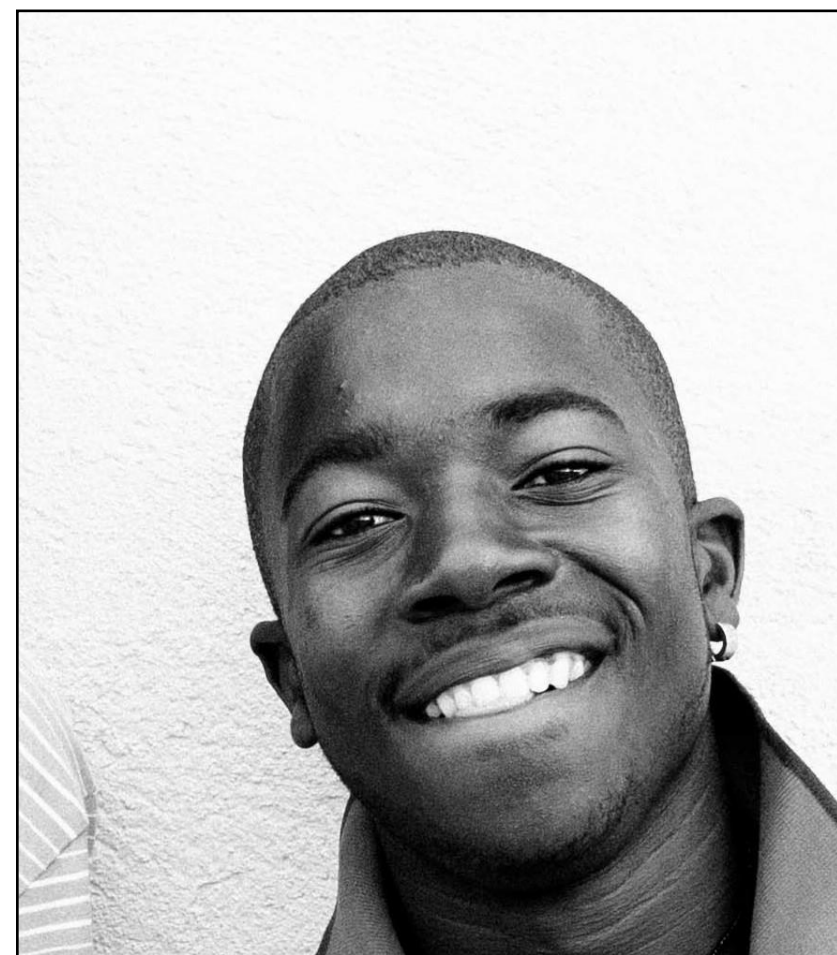
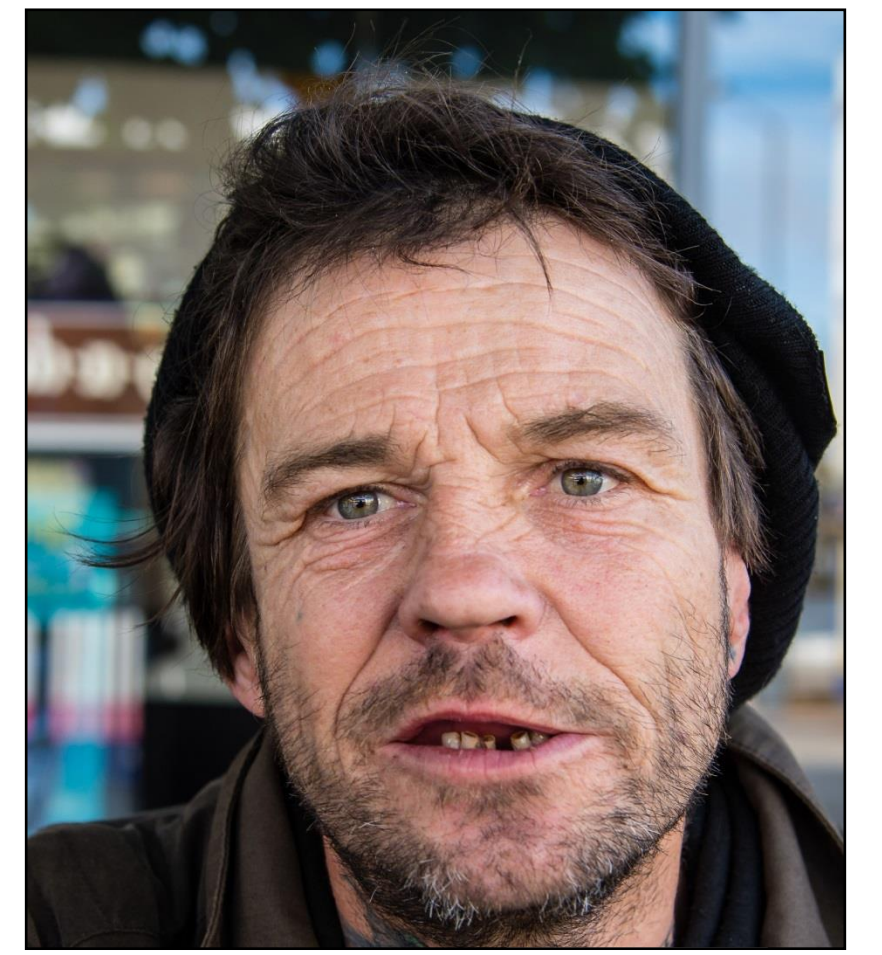




Video Source: https://www.youtube.com/watch?v=5Qqv_C6iVvQ



Dataset



Original

Automatic random warping manipulations



Original



#1 modification



#2 modification

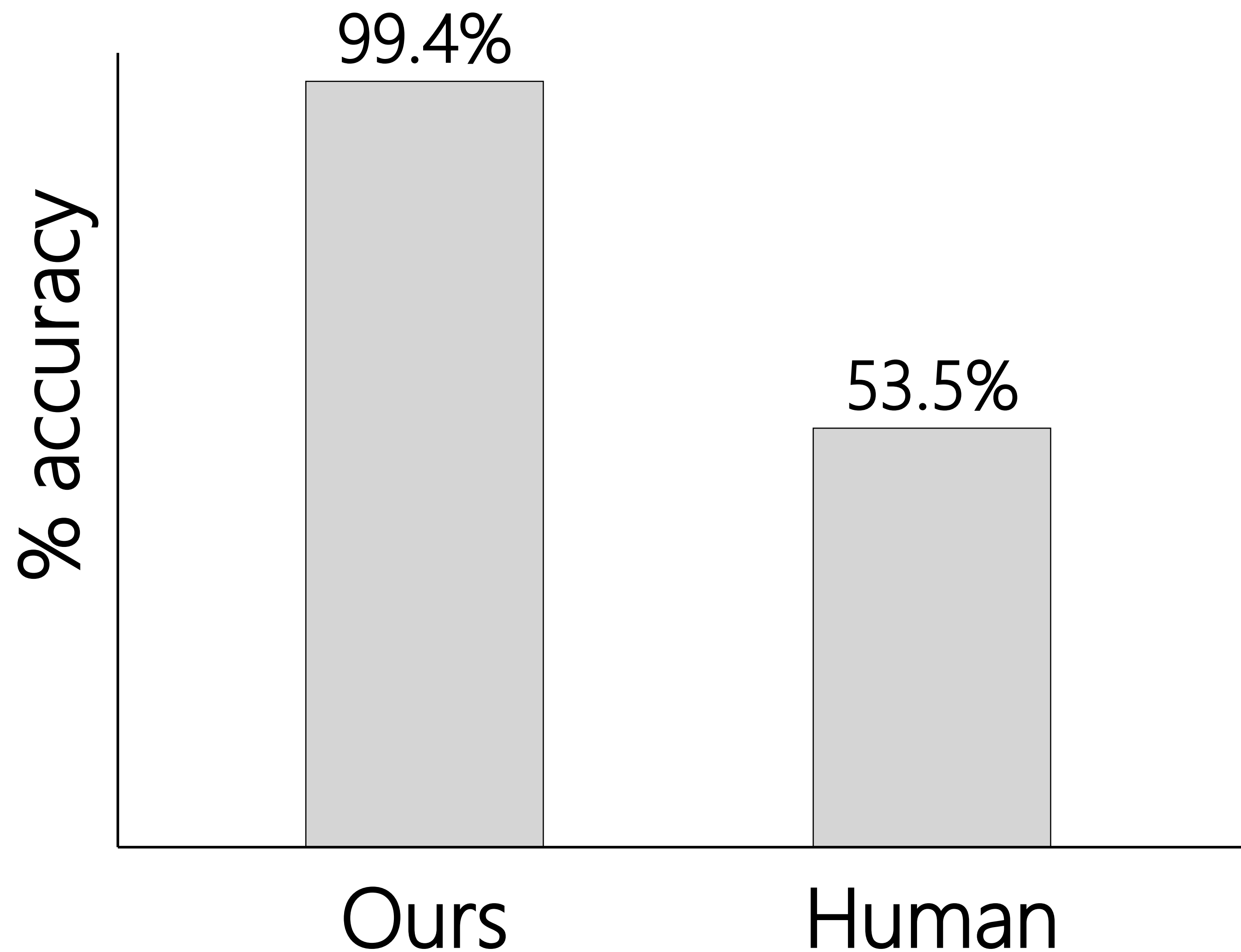


#3 modification



#4 modification

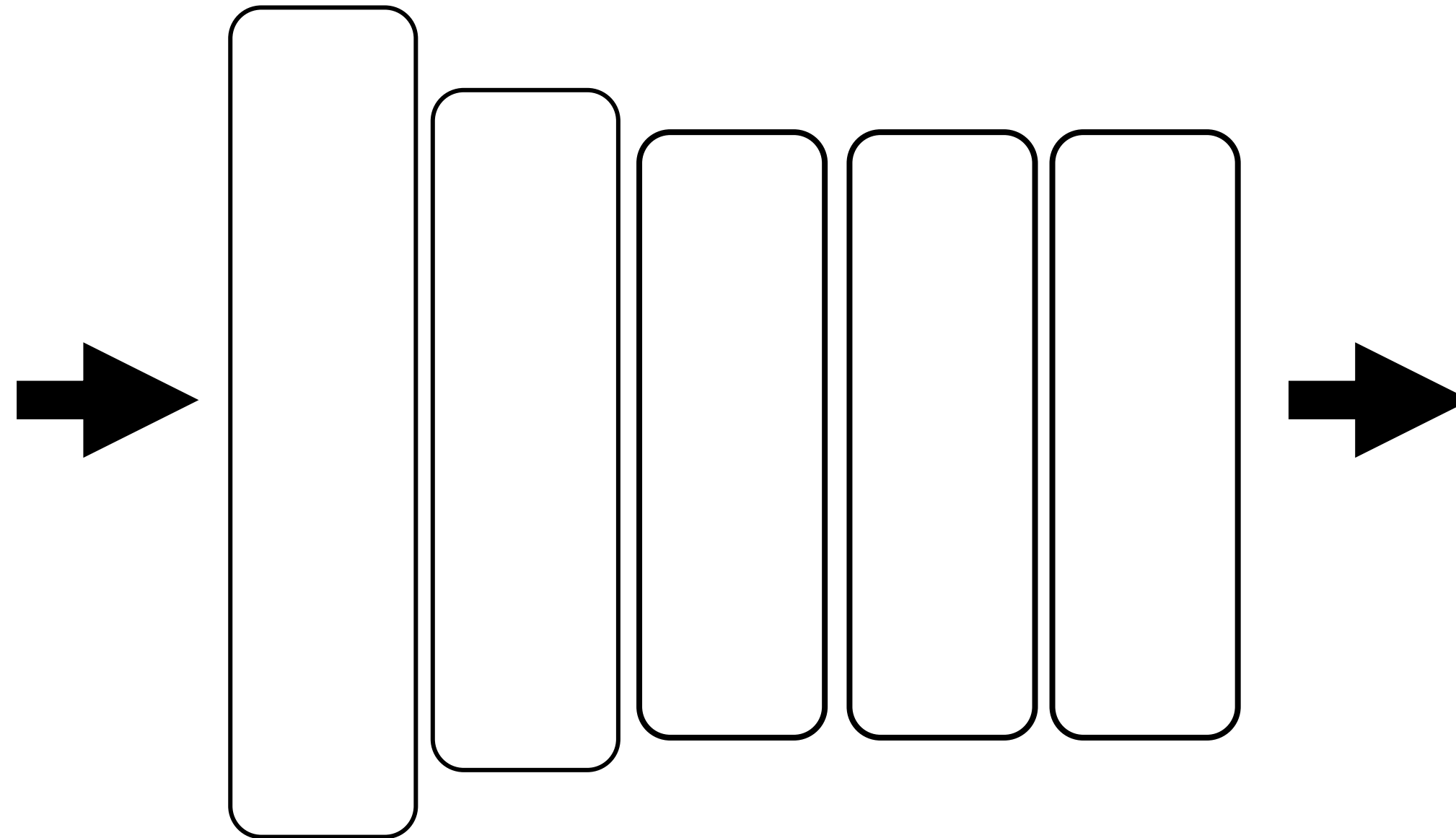
Real-or-fake classification



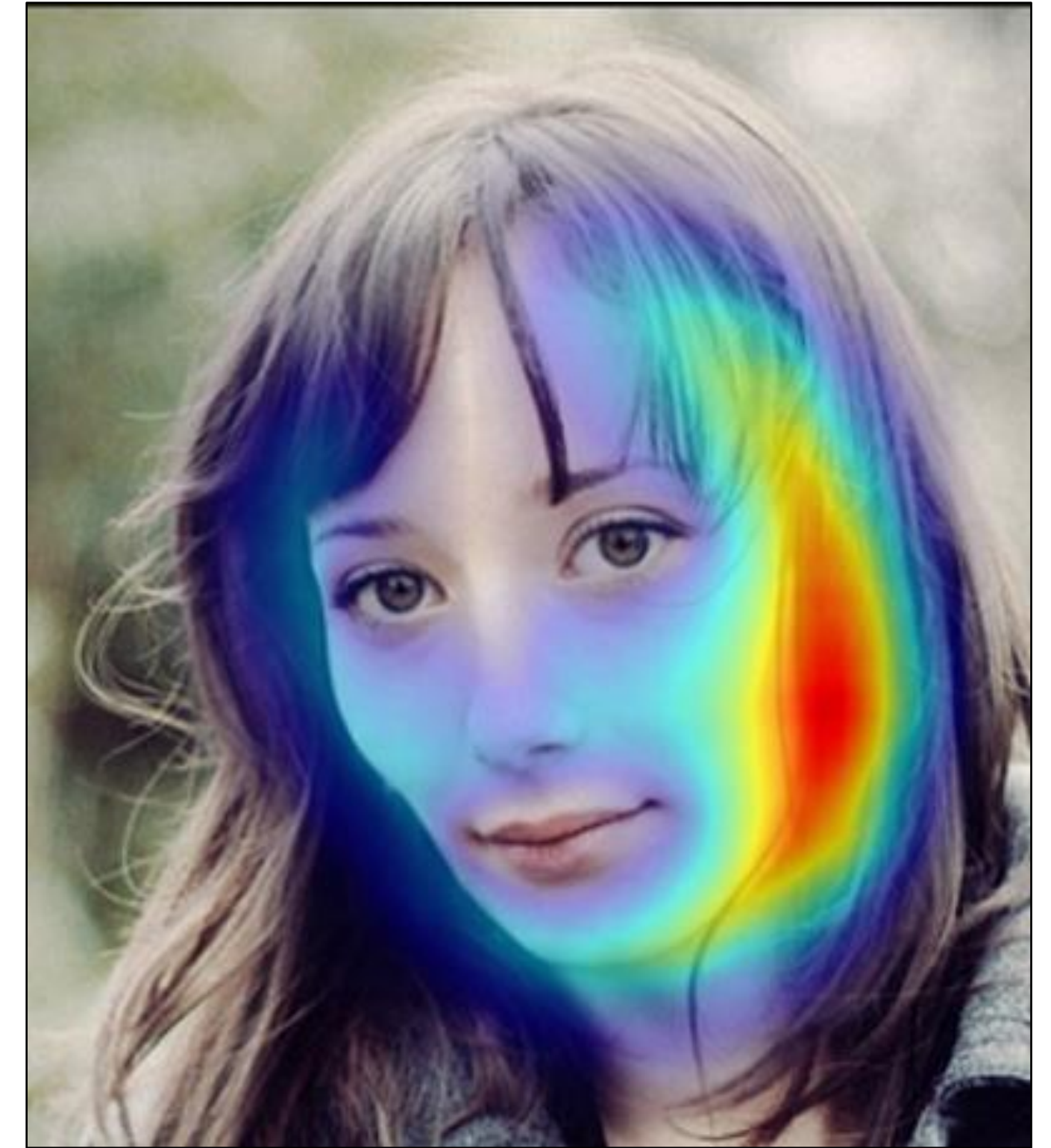
What moved where?



Manipulated Image

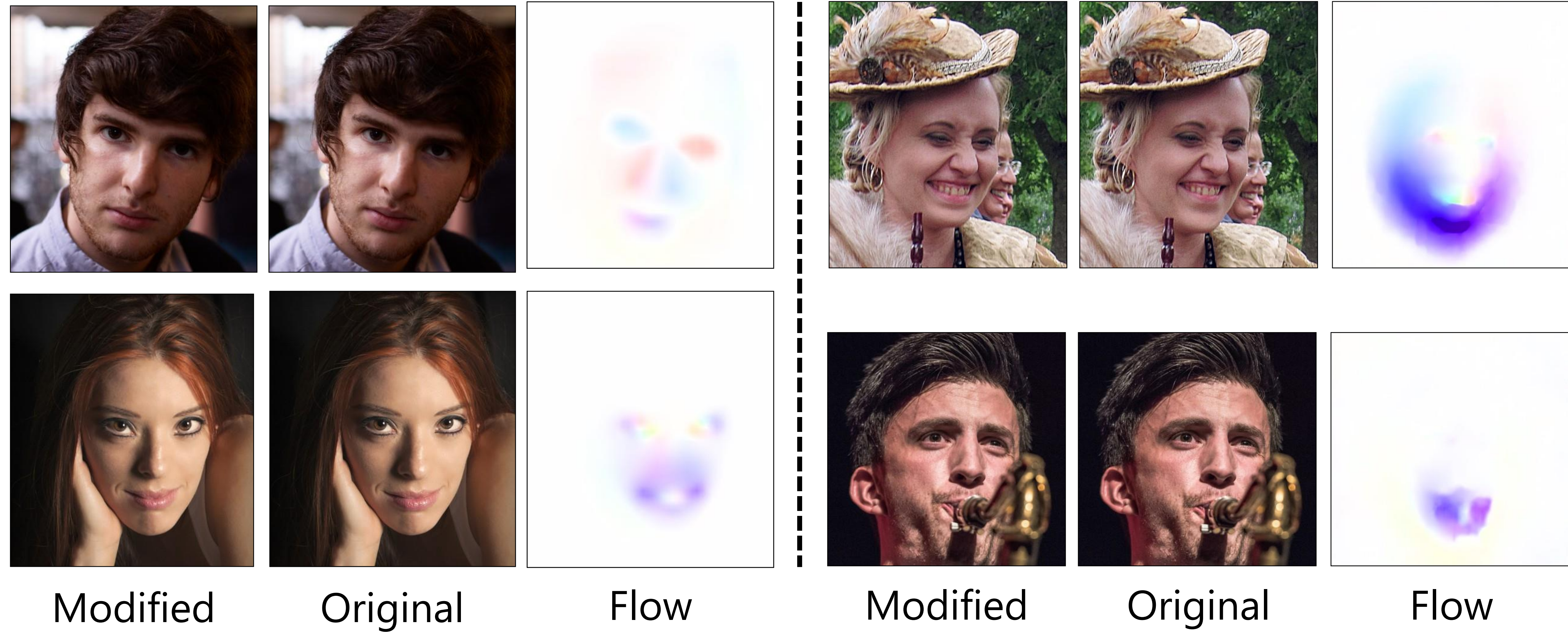


Dilated ResNet



Warp Prediction

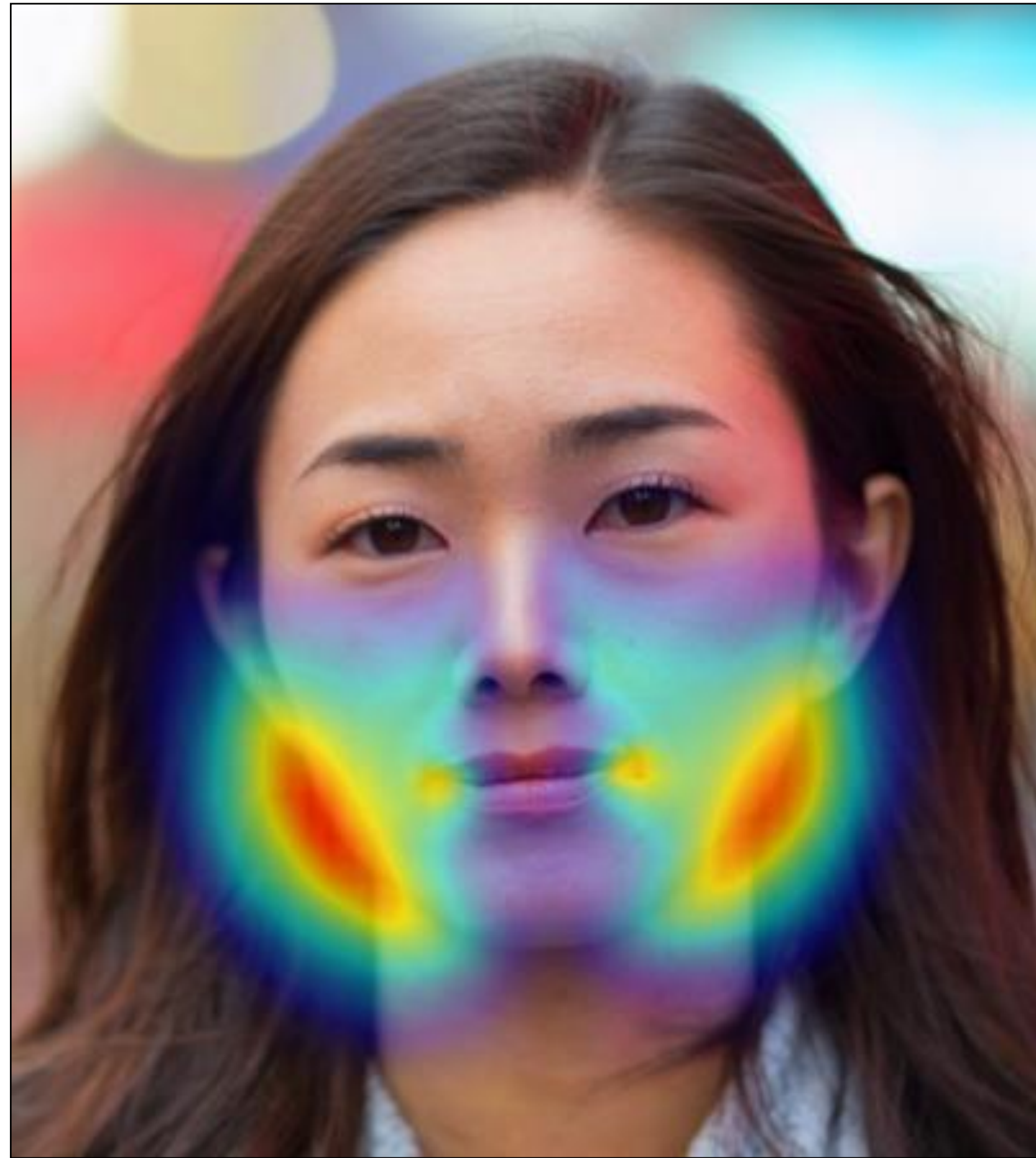
What moved where?



Results



Manipulated Photo



Flow Prediction



Suggested "Undo"



Original Photo



Manipulated vs. Original



Undo vs. Original



Manipulated Photo



Flow Prediction



Suggested "Undo"



Original Photo



Manipulated vs. Original



Undo vs. Original



Manipulated Photo



Flow Prediction



Suggested "Undo"



Original Photo



Manipulated vs. Original



Undo vs. Original



Manipulated Photo



Flow Prediction



Suggested "Undo"



Original Photo



Manipulated vs. Original



Undo vs. Original



Manipulated Photo



Flow Prediction



Suggested "Undo"



Original Photo



Manipulated vs. Original



Undo vs. Original



Manipulated Photo



Flow Prediction



Suggested "Undo"



Original Photo



Manipulated vs. Original



Undo vs. Original



Manipulated Photo



Flow Prediction



Suggested "Undo"



Original Photo



Manipulated vs. Original



Undo vs. Original

Thank you!

This work was supported, in part, by DARPA MediFor and UC Berkeley Center for Long-Term Cybersecurity.

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<https://peterwang512.github.io/FALdetector>