UNIVERSITY OF
OXFORD

Saïd
Business
School

AI Goes Mainstream

Neural Filters in Photoshop: Expression Change

Neural Filters

- Smart Portrait — Beta
- Makeup Transfer — Beta
- Depth-Aware H... — Beta
- Colorize — Beta
- Super Zoom — Beta
- Noise Reduction
- Face Cleanup
- Photo to Sketch
- Sketch to Portrait
- Pencil Artwork
- Face to Caricature

This filter processes image data in the cloud.

Expressions

- Happiness 11
- Surprise 0
- Anger -9

Subject

- Facial age 0
- Gaze 0
- Hair thickness 0
- Head direction 0
- Light direction 0

Mask settings

- Placement 0
- Feathering 20

Experimental

- Retain unique details 90

Are you satisfied with the results?

Yes | No

Output: New Layer | Cancel | OK

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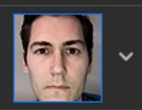

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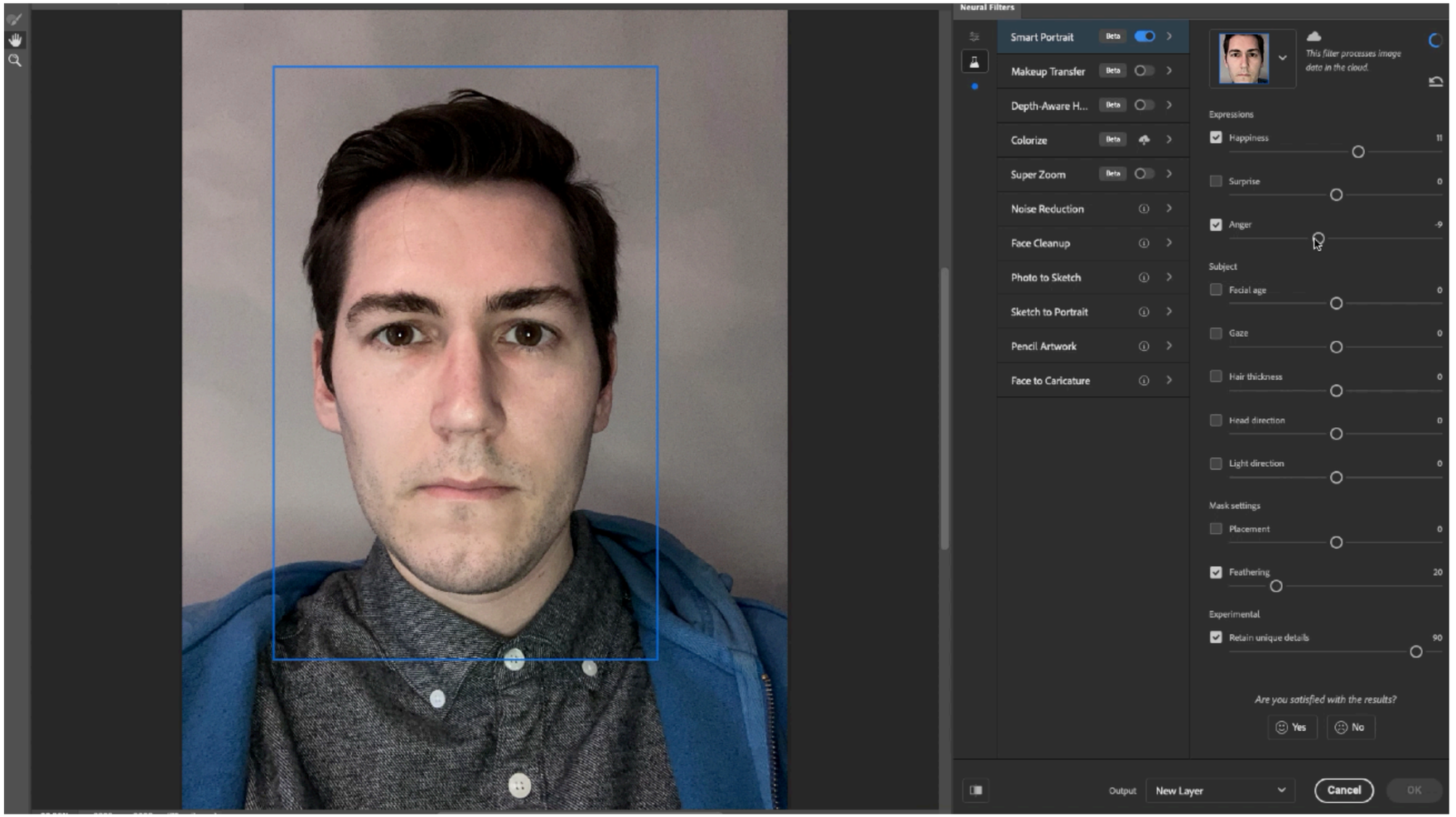

Computer Vision

AutoDraw and Neural Filters

- AutoDraw uses **image recognition**
  - Learned to recognize my whale because it had seen many human-drawn sketches of whales
- Wix ADI uses **predictive models** combined with **natural language processing** and good old fashioned programming
- Photoshop Neural Filters are made possible by StyleGan2 ADA
  - StyleGan2 is a **generative adversarial network (GAN)** made by Nvidia
  - As the name suggests, StyleGan2 is good for manipulating image styles

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