

# Facial Reshaping Operator for Controllable Face Beautification

## Appendix

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### Abstract

In this document, we describe the grouping of facial landmarks into facial parts, which enables part-based user control for face beautification. We also present the general facial image and frontal portrait beautification results, which are used for the user study in the paper.

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### Appendix 1

In this section, we describe how we group facial landmarks into the corresponding facial parts, which enables users to control the beautification of each individual part by specifying the beautification weight vector  $\mathbf{w}$  (Section 3.4 in  
5 the paper). We define the following facial parts and allow users to prescribe a beautification weight in  $[0, 1]$  for each part:

- **Jawline:**  $\mathbf{w}_1 = \dots \mathbf{w}_{17} = \mathbf{w}^{\text{JL}} \in [0, 1]$
- **Left eyebrow:**  $\mathbf{w}_{18} = \dots \mathbf{w}_{22} = \mathbf{w}^{\text{LB}} \in [0, 1]$
- **Right eyebrow:**  $\mathbf{w}_{23} = \dots \mathbf{w}_{27} = \mathbf{w}^{\text{RB}} \in [0, 1]$

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- 10 • **Nose bridge:**  $w_{28} = \dots w_{31} = w^{\text{NB}} \in [0, 1]$
- **Nostril:**  $w_{32} = \dots w_{36} = w^{\text{NO}} \in [0, 1]$
- **Left eye:**  $w_{37} = \dots w_{42} = w^{\text{LE}} \in [0, 1]$
- **Right eye:**  $w_{43} = \dots w_{48} = w^{\text{RE}} \in [0, 1]$
- **Outer lip:**  $w_{49} = \dots w_{60} = w^{\text{OL}} \in [0, 1]$
- 15 • **Inner lip:**  $w_{61} = \dots w_{68} = w^{\text{IL}} \in [0, 1]$

## Appendix 2

In this section, we present the 100 pairs of general facial image beautification results that are used for the first course of the user study in Section 4.2. These images come from the Helen testing set, which cover a wide range of non-frontal  
 20 poses and non-neutral expressions for demonstrating the robustness of our face beautification method in the wild.

## Appendix 3

In this section, we present the 100 pairs of frontal portrait beautification results that are used for the second course of the user study in Section 4.2. The  
 25 portraits contain the faces of both normal people and celebrities with different races. They are more constrained in that only the frontal pose and the neutral expression are present. We use them to demonstrate that our method works comparably well on both frontal portraits and general facial images.





(a) Input Face



(b) Beautified Face

Figure 2: **General Facial Images - Pair 2**



(a) Input Face

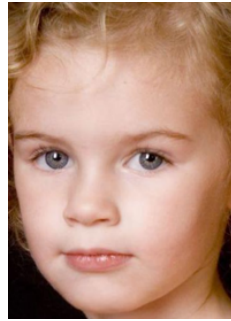


(b) Beautified Face

Figure 1: **General Facial Images - Pair 1**



(a) Input Face



(b) Beautified Face

Figure 3: **General Facial Images - Pair 3**



(a) Input Face



(b) Beautified Face

Figure 4: **General Facial Images - Pair 4**

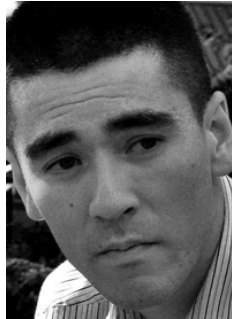


(a) Input Face

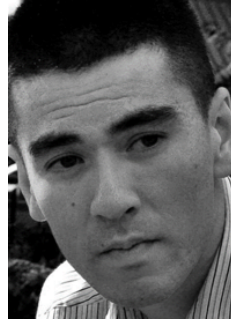


(b) Beautified Face

Figure 5: **General Facial Images - Pair 5**



(a) Input Face



(b) Beautified Face

Figure 6: **General Facial Images - Pair 6**

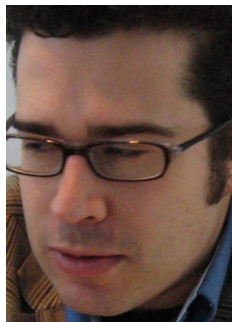


(a) Input Face

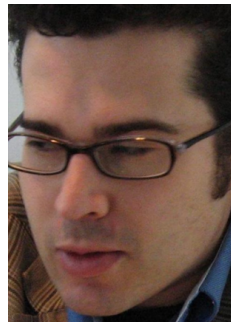


(b) Beautified Face

Figure 7: **General Facial Images - Pair 7**



(a) Input Face



(b) Beautified Face

Figure 8: **General Facial Images - Pair 8**



(a) Input Face



(b) Beautified Face

Figure 9: **General Facial Images - Pair 9**

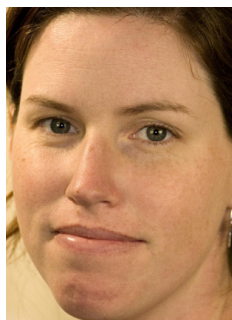


(a) Input Face



(b) Beautified Face

Figure 10: **General Facial Images - Pair 10**



(a) Input Face



(b) Beautified Face

Figure 11: **General Facial Images - Pair 11**

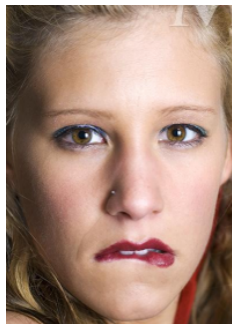


(a) Input Face

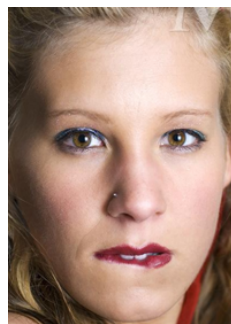


(b) Beautified Face

Figure 12: **General Facial Images - Pair 12**

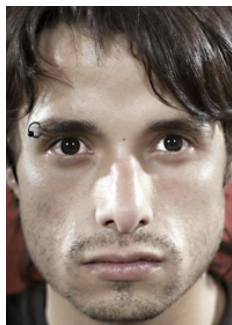


(a) Input Face

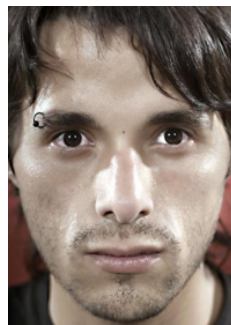


(b) Beautified Face

Figure 13: **General Facial Images - Pair 13**



(a) Input Face



(b) Beautified Face

Figure 14: **General Facial Images - Pair 14**



(a) Input Face



(b) Beautified Face

Figure 15: **General Facial Images - Pair 15**

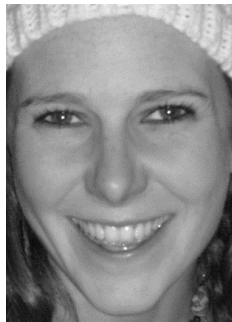


(a) Input Face

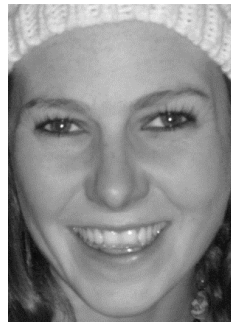


(b) Beautified Face

Figure 16: **General Facial Images - Pair 16**



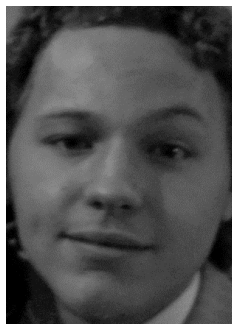
(a) Input Face



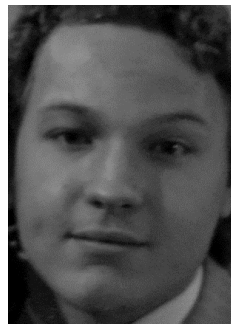
(b) Beautified Face

Figure 17: **General Facial Images - Pair 17**



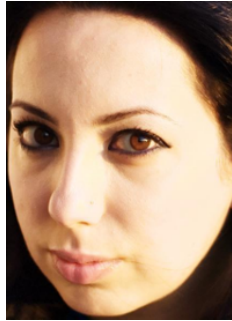


(a) Input Face

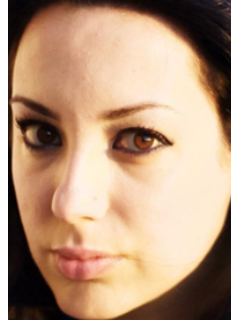


(b) Beautified Face

Figure 18: **General Facial Images - Pair 18**



(a) Input Face

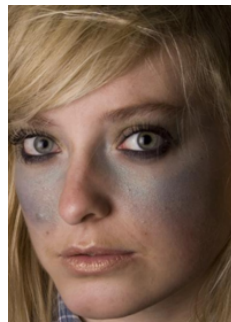


(b) Beautified Face

Figure 19: **General Facial Images - Pair 19**



(a) Input Face



(b) Beautified Face

Figure 20: **General Facial Images - Pair 20**



(a) Input Face



(b) Beautified Face

Figure 21: **General Facial Images - Pair 21**





(a) Input Face



(b) Beautified Face

Figure 22: General Facial Images - Pair 22



(a) Input Face

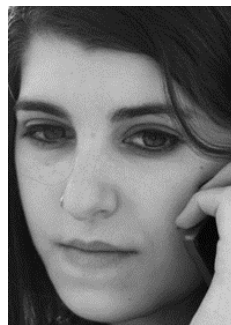


(b) Beautified Face

Figure 23: General Facial Images - Pair 23



(a) Input Face



(b) Beautified Face

Figure 24: General Facial Images - Pair 24



(a) Input Face



(b) Beautified Face

Figure 25: **General Facial Images - Pair 25**



(a) Input Face



(b) Beautified Face

Figure 26: **General Facial Images - Pair 26**



(a) Input Face

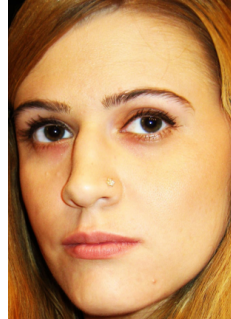


(b) Beautified Face

Figure 27: **General Facial Images - Pair 27**

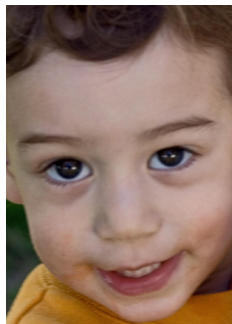


(a) Input Face

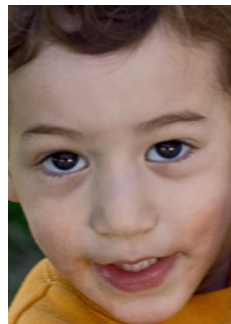


(b) Beautified Face

Figure 28: **General Facial Images - Pair 28**



(a) Input Face



(b) Beautified Face

Figure 29: **General Facial Images - Pair 29**

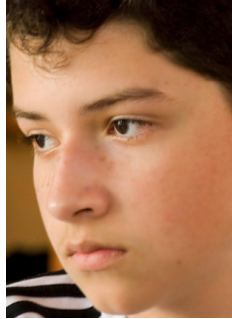


(a) Input Face

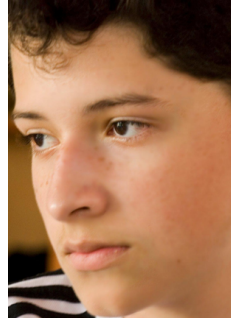


(b) Beautified Face

Figure 30: **General Facial Images - Pair 30**

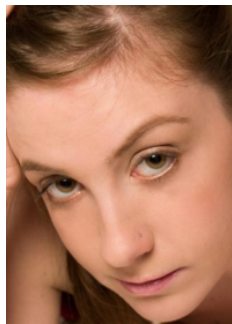


(a) Input Face



(b) Beautified Face

Figure 31: General Facial Images - Pair 31

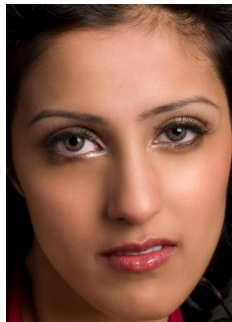


(a) Input Face



(b) Beautified Face

Figure 32: General Facial Images - Pair 32



(a) Input Face



(b) Beautified Face

Figure 33: General Facial Images - Pair 33



(a) Input Face



(b) Beautified Face

Figure 34: **General Facial Images - Pair 34**

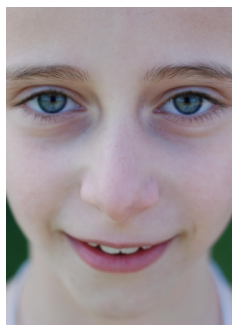


(a) Input Face

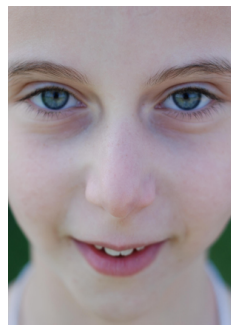


(b) Beautified Face

Figure 35: **General Facial Images - Pair 35**



(a) Input Face



(b) Beautified Face

Figure 36: **General Facial Images - Pair 36**

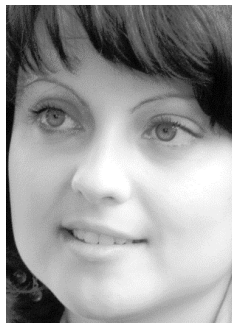


(a) Input Face

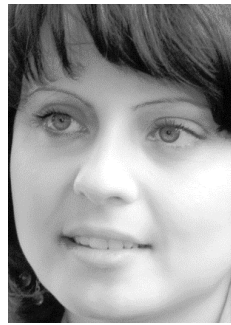


(b) Beautified Face

Figure 37: **General Facial Images - Pair 37**



(a) Input Face



(b) Beautified Face

Figure 38: **General Facial Images - Pair 38**



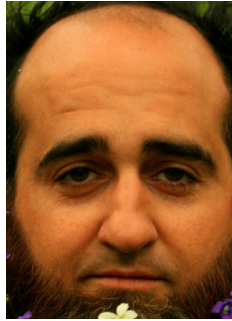
(a) Input Face



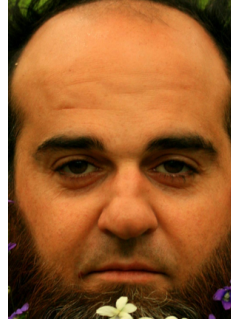
(b) Beautified Face

Figure 39: **General Facial Images - Pair 39**





(a) Input Face



(b) Beautified Face

Figure 40: **General Facial Images - Pair 40**



(a) Input Face



(b) Beautified Face

Figure 41: **General Facial Images - Pair 41**



(a) Input Face



(b) Beautified Face

Figure 42: **General Facial Images - Pair 42**



(a) Input Face



(b) Beautified Face

Figure 43: General Facial Images - Pair 43



(a) Input Face



(b) Beautified Face

Figure 44: General Facial Images - Pair 44



(a) Input Face



(b) Beautified Face

Figure 45: General Facial Images - Pair 45





(a) Input Face

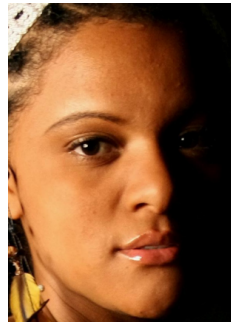


(b) Beautified Face

Figure 46: **General Facial Images - Pair 46**



(a) Input Face



(b) Beautified Face

Figure 47: **General Facial Images - Pair 47**



(a) Input Face

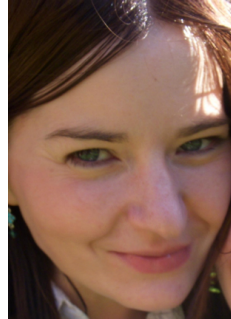


(b) Beautified Face

Figure 48: **General Facial Images - Pair 48**



(a) Input Face

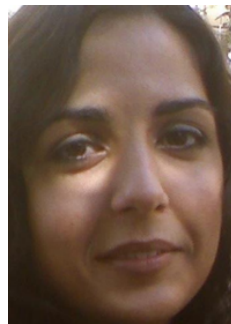


(b) Beautified Face

Figure 49: **General Facial Images - Pair 49**

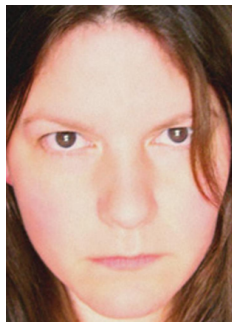


(a) Input Face

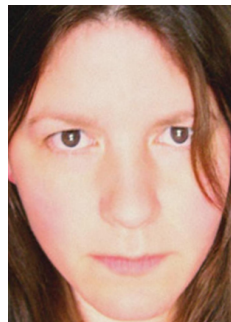


(b) Beautified Face

Figure 50: **General Facial Images - Pair 50**



(a) Input Face



(b) Beautified Face

Figure 51: **General Facial Images - Pair 51**



(a) Input Face



(b) Beautified Face

Figure 52: **General Facial Images - Pair 52**



(a) Input Face



(b) Beautified Face

Figure 53: **General Facial Images - Pair 53**

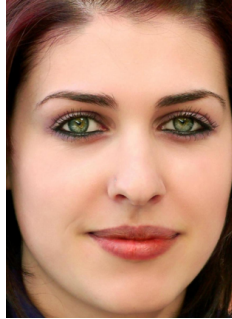


(a) Input Face

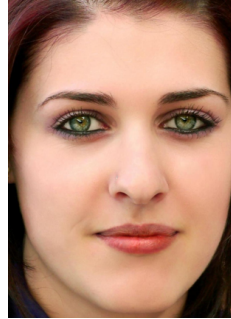


(b) Beautified Face

Figure 54: **General Facial Images - Pair 54**



(a) Input Face



(b) Beautified Face

Figure 55: **General Facial Images - Pair 55**



(a) Input Face



(b) Beautified Face

Figure 56: **General Facial Images - Pair 56**

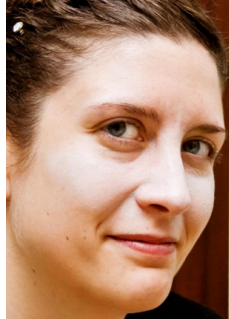


(a) Input Face

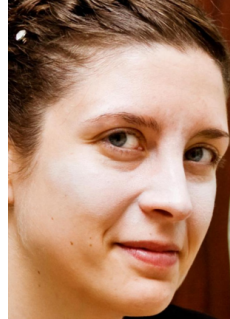


(b) Beautified Face

Figure 57: **General Facial Images - Pair 57**

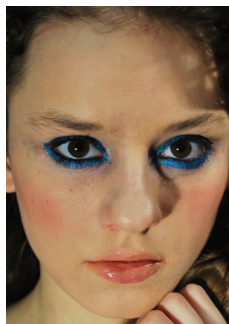


(a) Input Face

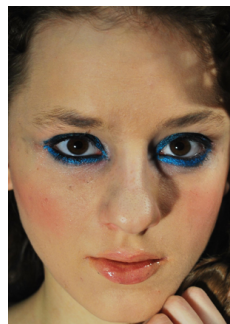


(b) Beautified Face

Figure 58: **General Facial Images - Pair 58**

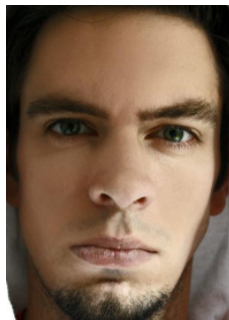


(a) Input Face

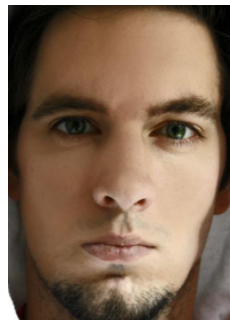


(b) Beautified Face

Figure 59: **General Facial Images - Pair 59**



(a) Input Face



(b) Beautified Face

Figure 60: **General Facial Images - Pair 60**

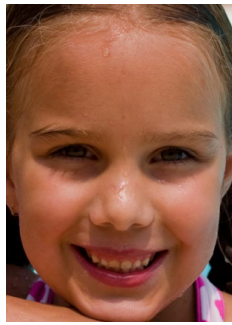


(a) Input Face

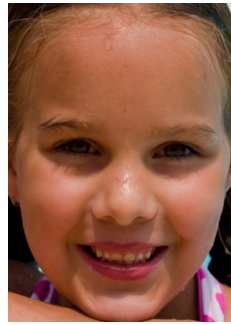


(b) Beautified Face

Figure 61: **General Facial Images - Pair 61**



(a) Input Face



(b) Beautified Face

Figure 62: **General Facial Images - Pair 62**



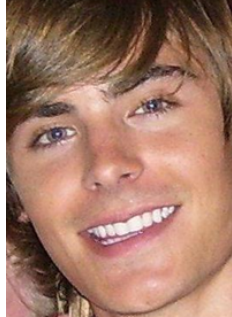
(a) Input Face



(b) Beautified Face

Figure 63: **General Facial Images - Pair 63**



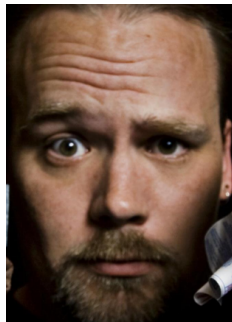


(a) Input Face



(b) Beautified Face

Figure 64: **General Facial Images - Pair 64**



(a) Input Face



(b) Beautified Face

Figure 65: **General Facial Images - Pair 65**



(a) Input Face



(b) Beautified Face

Figure 66: **General Facial Images - Pair 66**



(a) Input Face

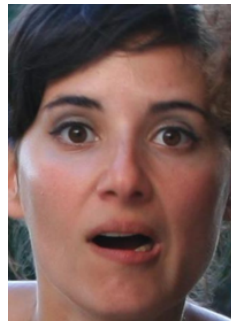


(b) Beautified Face

Figure 67: **General Facial Images - Pair 67**



(a) Input Face



(b) Beautified Face

Figure 68: **General Facial Images - Pair 68**



(a) Input Face



(b) Beautified Face

Figure 69: **General Facial Images - Pair 69**





(a) Input Face



(b) Beautified Face

Figure 70: General Facial Images - Pair 70



(a) Input Face



(b) Beautified Face

Figure 71: General Facial Images - Pair 71



(a) Input Face



(b) Beautified Face

Figure 72: General Facial Images - Pair 72



(a) Input Face



(b) Beautified Face

Figure 73: **General Facial Images - Pair 73**



(a) Input Face



(b) Beautified Face

Figure 74: **General Facial Images - Pair 74**



(a) Input Face



(b) Beautified Face

Figure 75: **General Facial Images - Pair 75**



(a) Input Face



(b) Beautified Face

Figure 76: General Facial Images - Pair 76



(a) Input Face



(b) Beautified Face

Figure 77: General Facial Images - Pair 77



(a) Input Face



(b) Beautified Face

Figure 78: General Facial Images - Pair 78



(a) Input Face



(b) Beautified Face

Figure 79: **General Facial Images - Pair 79**



(a) Input Face



(b) Beautified Face

Figure 80: **General Facial Images - Pair 80**



(a) Input Face



(b) Beautified Face

Figure 81: **General Facial Images - Pair 81**

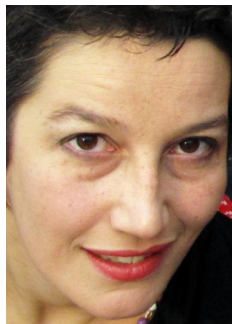


(a) Input Face

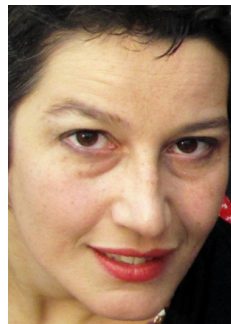


(b) Beautified Face

Figure 82: General Facial Images - Pair 82



(a) Input Face



(b) Beautified Face

Figure 83: General Facial Images - Pair 83



(a) Input Face



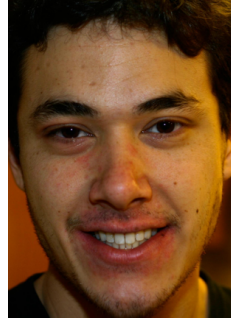
(b) Beautified Face

Figure 84: General Facial Images - Pair 84



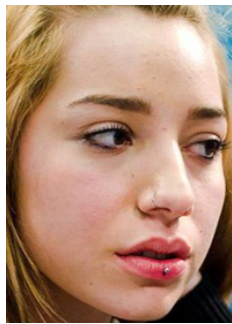


(a) Input Face

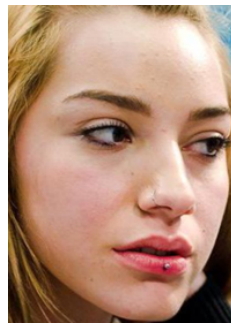


(b) Beautified Face

Figure 85: **General Facial Images - Pair 85**



(a) Input Face



(b) Beautified Face

Figure 86: **General Facial Images - Pair 86**



(a) Input Face



(b) Beautified Face

Figure 87: **General Facial Images - Pair 87**



(a) Input Face



(b) Beautified Face

Figure 88: **General Facial Images - Pair 88**

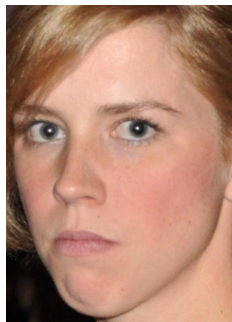


(a) Input Face



(b) Beautified Face

Figure 89: **General Facial Images - Pair 89**

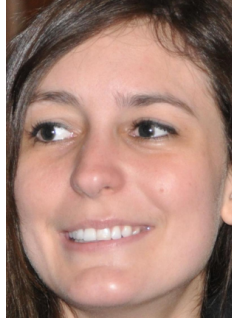


(a) Input Face

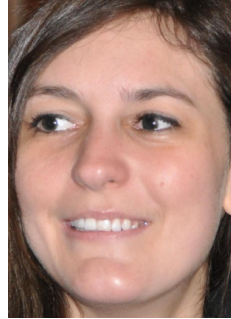


(b) Beautified Face

Figure 90: **General Facial Images - Pair 90**



(a) Input Face



(b) Beautified Face

Figure 91: General Facial Images - Pair 91



(a) Input Face



(b) Beautified Face

Figure 92: General Facial Images - Pair 92



(a) Input Face



(b) Beautified Face

Figure 93: General Facial Images - Pair 93



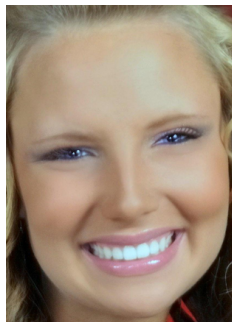


(a) Input Face



(b) Beautified Face

Figure 94: **General Facial Images - Pair 94**

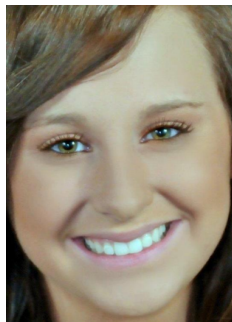


(a) Input Face

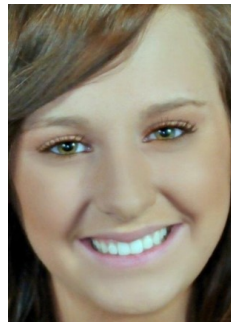


(b) Beautified Face

Figure 95: **General Facial Images - Pair 95**



(a) Input Face



(b) Beautified Face

Figure 96: **General Facial Images - Pair 96**



(a) Input Face



(b) Beautified Face

Figure 97: General Facial Images - Pair 97



(a) Input Face



(b) Beautified Face

Figure 98: General Facial Images - Pair 98



(a) Input Face



(b) Beautified Face

Figure 99: General Facial Images - Pair 99

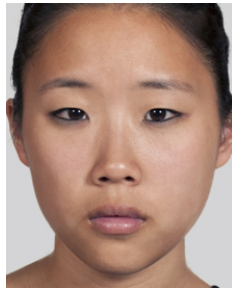


(a) Input Face



(b) Beautified Face

Figure 100: **General Facial Images - Pair 100**

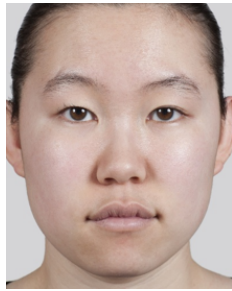


(a) Input Face

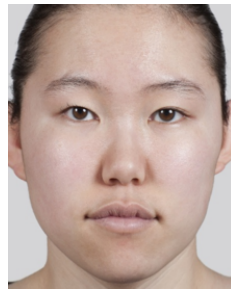


(b) Beautified Face

Figure 102: **Frontal Portraits - Pair 2**

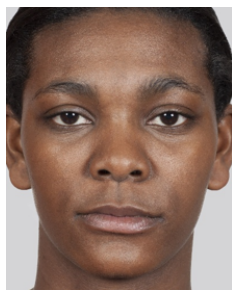


(a) Input Face

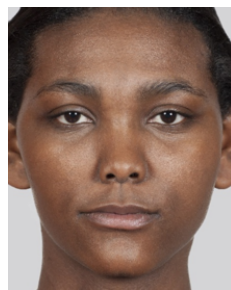


(b) Beautified Face

Figure 103: **Frontal Portraits - Pair 3**



(a) Input Face



(b) Beautified Face

Figure 101: **Frontal Portraits - Pair 1**



(a) Input Face



(b) Beautified Face

Figure 104: **Frontal Portraits - Pair 4**



(a) Input Face



(b) Beautified Face

Figure 105: **Frontal Portraits - Pair 5**

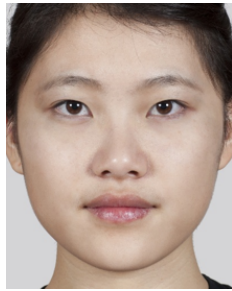


(a) Input Face



(b) Beautified Face

Figure 106: **Frontal Portraits - Pair 6**



(a) Input Face



(b) Beautified Face

Figure 107: **Frontal Portraits - Pair 7**



(a) Input Face



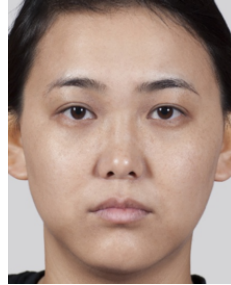
(b) Beautified Face

Figure 108: **Frontal Portraits - Pair 8**



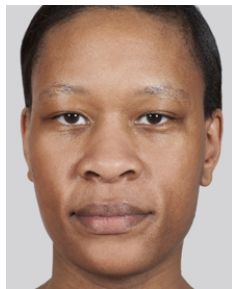


(a) Input Face

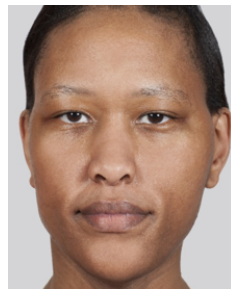


(b) Beautified Face

Figure 109: **Frontal Portraits - Pair 9**

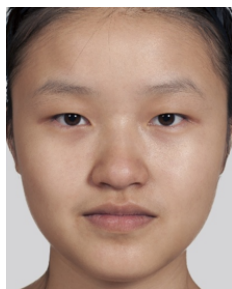


(a) Input Face

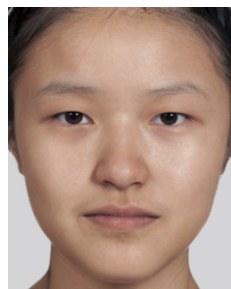


(b) Beautified Face

Figure 110: **Frontal Portraits - Pair 10**

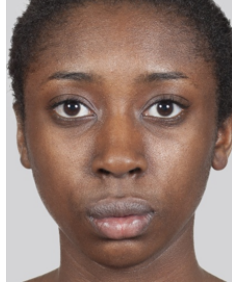


(a) Input Face

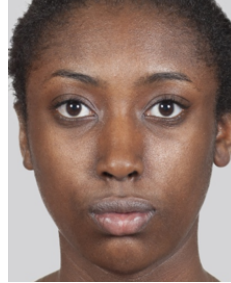


(b) Beautified Face

Figure 111: **Frontal Portraits - Pair 11**



(a) Input Face



(b) Beautified Face

Figure 112: Frontal Portraits - Pair 12

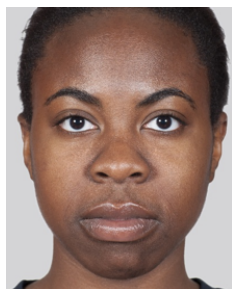


(a) Input Face

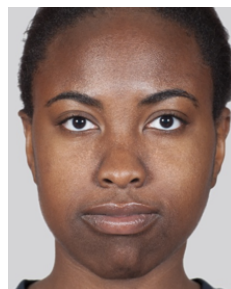


(b) Beautified Face

Figure 113: Frontal Portraits - Pair 13

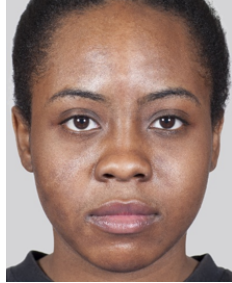


(a) Input Face

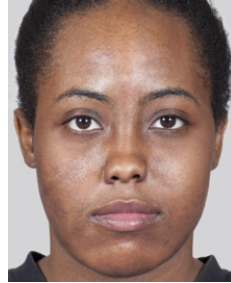


(b) Beautified Face

Figure 114: Frontal Portraits - Pair 14

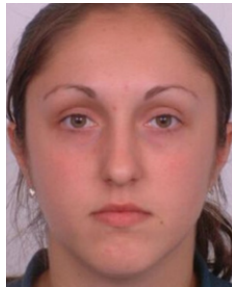


(a) Input Face

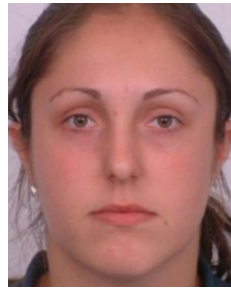


(b) Beautified Face

Figure 115: Frontal Portraits - Pair 15

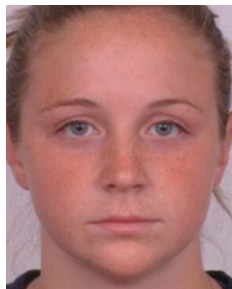


(a) Input Face

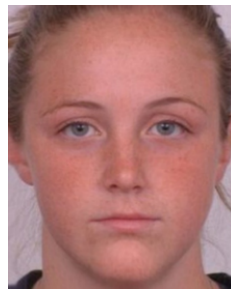


(b) Beautified Face

Figure 116: Frontal Portraits - Pair 16

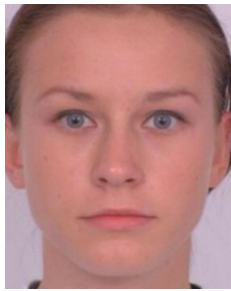


(a) Input Face



(b) Beautified Face

Figure 117: Frontal Portraits - Pair 17

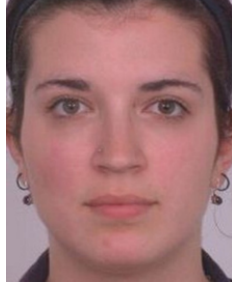


(a) Input Face

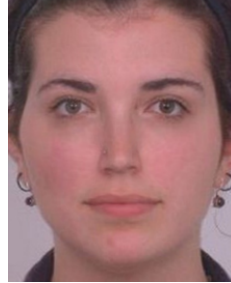


(b) Beautified Face

Figure 118: **Frontal Portraits - Pair 18**



(a) Input Face



(b) Beautified Face

Figure 119: Frontal Portraits - Pair 19



(a) Input Face



(b) Beautified Face

Figure 120: Frontal Portraits - Pair 20



(a) Input Face



(b) Beautified Face

Figure 121: Frontal Portraits - Pair 21

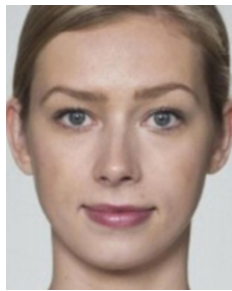


(a) Input Face



(b) Beautified Face

Figure 122: Frontal Portraits - Pair 22

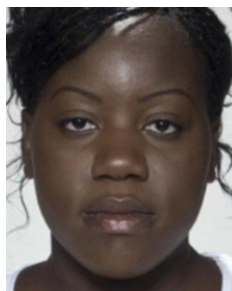


(a) Input Face

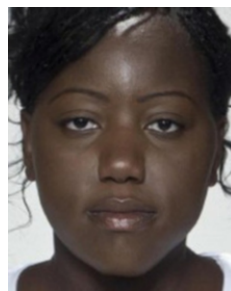


(b) Beautified Face

Figure 123: Frontal Portraits - Pair 23



(a) Input Face



(b) Beautified Face

Figure 124: Frontal Portraits - Pair 24





(a) Input Face



(b) Beautified Face

Figure 125: Frontal Portraits - Pair 25

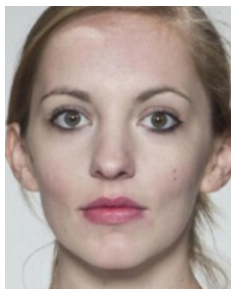


(a) Input Face

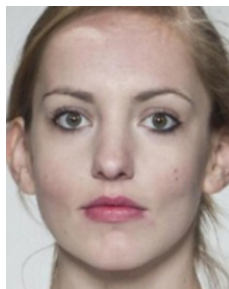


(b) Beautified Face

Figure 126: Frontal Portraits - Pair 26



(a) Input Face



(b) Beautified Face

Figure 127: Frontal Portraits - Pair 27



(a) Input Face



(b) Beautified Face

Figure 128: Frontal Portraits - Pair 28

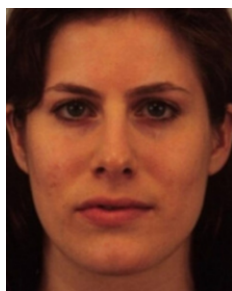


(a) Input Face

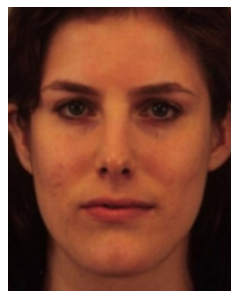


(b) Beautified Face

Figure 129: Frontal Portraits - Pair 29

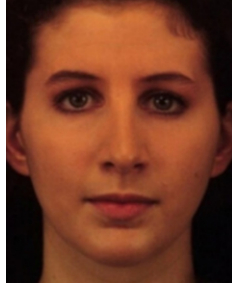


(a) Input Face

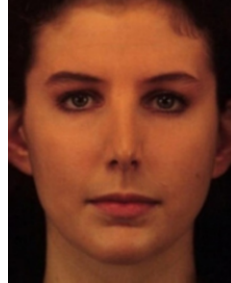


(b) Beautified Face

Figure 130: Frontal Portraits - Pair 30



(a) Input Face



(b) Beautified Face

Figure 131: **Frontal Portraits - Pair 31**

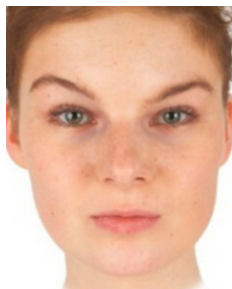


(a) Input Face

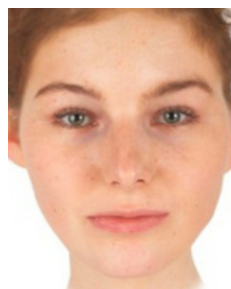


(b) Beautified Face

Figure 132: **Frontal Portraits - Pair 32**



(a) Input Face



(b) Beautified Face

Figure 133: **Frontal Portraits - Pair 33**



(a) Input Face

(b) Beautified Face

Figure 134: **Frontal Portraits - Pair 34**



(a) Input Face

(b) Beautified Face

Figure 135: **Frontal Portraits - Pair 35**



(a) Input Face

(b) Beautified Face

Figure 136: **Frontal Portraits - Pair 36**



(a) Input Face

(b) Beautified Face

Figure 137: **Frontal Portraits - Pair 37**



(a) Input Face

(b) Beautified Face

Figure 138: **Frontal Portraits - Pair 38**



(a) Input Face

(b) Beautified Face

Figure 139: **Frontal Portraits - Pair 39**



(a) Input Face

(b) Beautified Face

Figure 140: **Frontal Portraits - Pair 40**



(a) Input Face

(b) Beautified Face

Figure 141: **Frontal Portraits - Pair 41**



(a) Input Face

(b) Beautified Face

Figure 142: **Frontal Portraits - Pair 42**

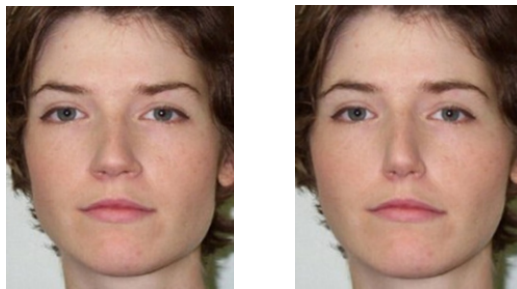




(a) Input Face

(b) Beautified Face

Figure 143: Frontal Portraits - Pair 43



(a) Input Face

(b) Beautified Face

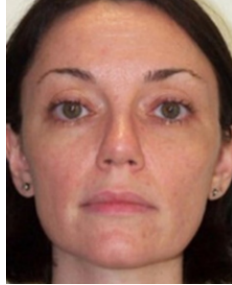
Figure 144: Frontal Portraits - Pair 44



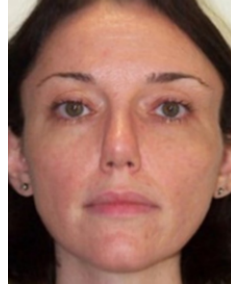
(a) Input Face

(b) Beautified Face

Figure 145: Frontal Portraits - Pair 45



(a) Input Face



(b) Beautified Face

Figure 146: Frontal Portraits - Pair 46

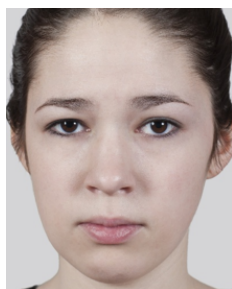


(a) Input Face



(b) Beautified Face

Figure 147: Frontal Portraits - Pair 47

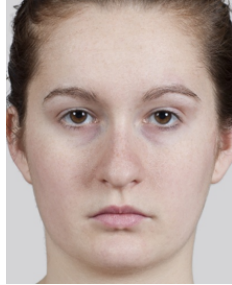


(a) Input Face

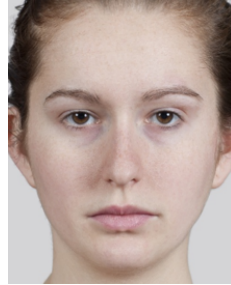


(b) Beautified Face

Figure 148: Frontal Portraits - Pair 48



(a) Input Face



(b) Beautified Face

Figure 149: Frontal Portraits - Pair 49



(a) Input Face



(b) Beautified Face

Figure 150: Frontal Portraits - Pair 50



(a) Input Face



(b) Beautified Face

Figure 151: Frontal Portraits - Pair 51



(a) Input Face



(b) Beautified Face

Figure 152: Frontal Portraits - Pair 52

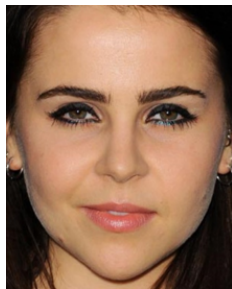


(a) Input Face

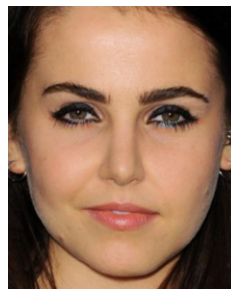


(b) Beautified Face

Figure 153: Frontal Portraits - Pair 53



(a) Input Face



(b) Beautified Face

Figure 154: Frontal Portraits - Pair 54

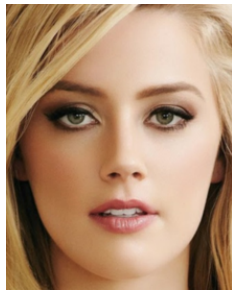


(a) Input Face

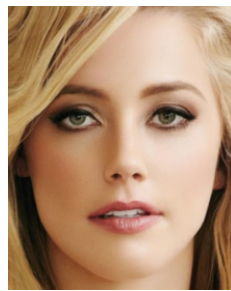


(b) Beautified Face

Figure 155: **Frontal Portraits - Pair 55**



(a) Input Face



(b) Beautified Face

Figure 156: **Frontal Portraits - Pair 56**



(a) Input Face



(b) Beautified Face

Figure 157: **Frontal Portraits - Pair 57**



(a) Input Face



(b) Beautified Face

Figure 158: **Frontal Portraits - Pair 58**

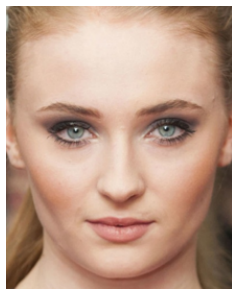


(a) Input Face

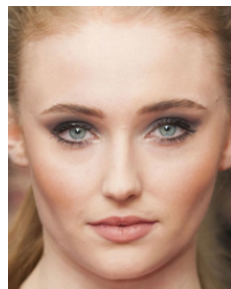


(b) Beautified Face

Figure 159: **Frontal Portraits - Pair 59**



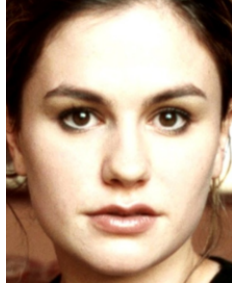
(a) Input Face



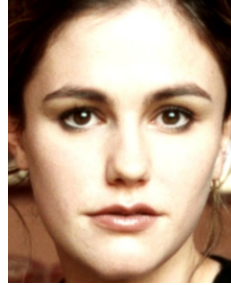
(b) Beautified Face

Figure 160: **Frontal Portraits - Pair 60**





(a) Input Face

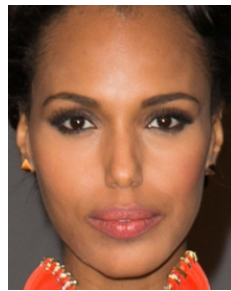


(b) Beautified Face

Figure 161: Frontal Portraits - Pair 61



(a) Input Face



(b) Beautified Face

Figure 162: Frontal Portraits - Pair 62

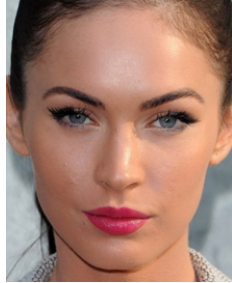


(a) Input Face

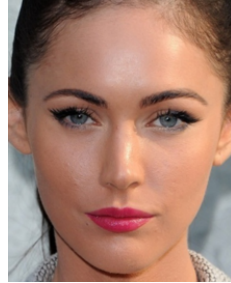


(b) Beautified Face

Figure 163: Frontal Portraits - Pair 63

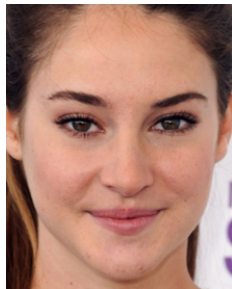


(a) Input Face

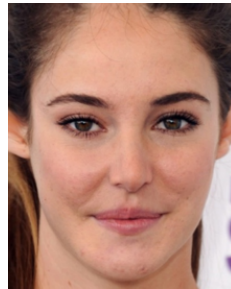


(b) Beautified Face

Figure 164: Frontal Portraits - Pair 64

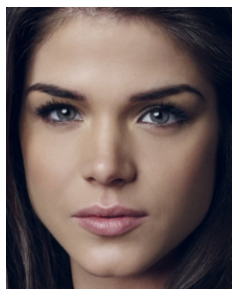


(a) Input Face



(b) Beautified Face

Figure 165: Frontal Portraits - Pair 65



(a) Input Face



(b) Beautified Face

Figure 166: Frontal Portraits - Pair 66



(a) Input Face



(b) Beautified Face

Figure 167: Frontal Portraits - Pair 67



(a) Input Face



(b) Beautified Face

Figure 168: Frontal Portraits - Pair 68



(a) Input Face

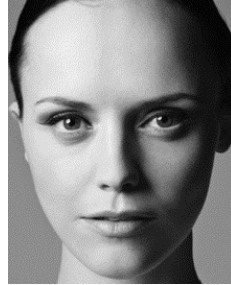


(b) Beautified Face

Figure 169: Frontal Portraits - Pair 69

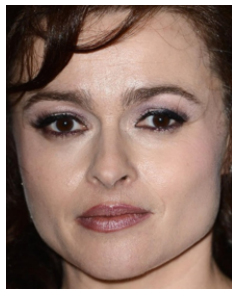


(a) Input Face

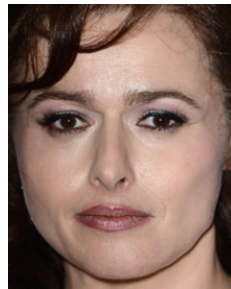


(b) Beautified Face

Figure 170: Frontal Portraits - Pair 70



(a) Input Face



(b) Beautified Face

Figure 171: Frontal Portraits - Pair 71



(a) Input Face



(b) Beautified Face

Figure 172: Frontal Portraits - Pair 72



(a) Input Face



(b) Beautified Face

Figure 173: **Frontal Portraits - Pair 73**



(a) Input Face



(b) Beautified Face

Figure 174: **Frontal Portraits - Pair 74**

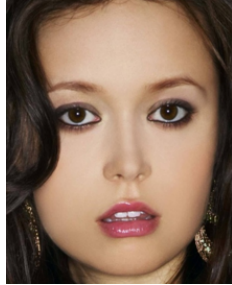


(a) Input Face

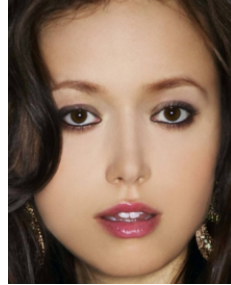


(b) Beautified Face

Figure 175: **Frontal Portraits - Pair 75**

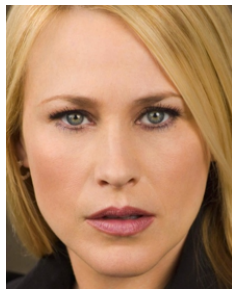


(a) Input Face

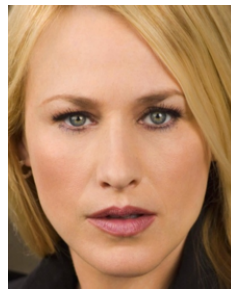


(b) Beautified Face

Figure 176: Frontal Portraits - Pair 76

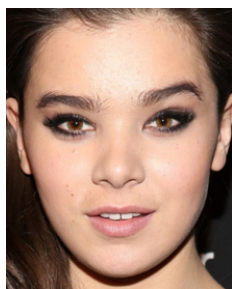


(a) Input Face

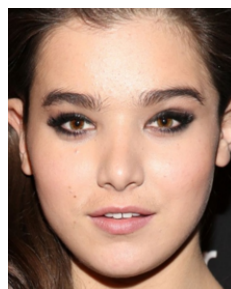


(b) Beautified Face

Figure 177: Frontal Portraits - Pair 77



(a) Input Face



(b) Beautified Face

Figure 178: Frontal Portraits - Pair 78





(a) Input Face



(b) Beautified Face

Figure 179: Frontal Portraits - Pair 79

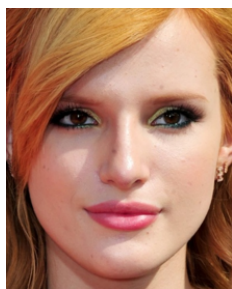


(a) Input Face



(b) Beautified Face

Figure 180: Frontal Portraits - Pair 80



(a) Input Face



(b) Beautified Face

Figure 181: Frontal Portraits - Pair 81





(a) Input Face



(b) Beautified Face

Figure 182: Frontal Portraits - Pair 82



(a) Input Face



(b) Beautified Face

Figure 183: Frontal Portraits - Pair 83



(a) Input Face



(b) Beautified Face

Figure 184: Frontal Portraits - Pair 84



(a) Input Face



(b) Beautified Face

Figure 185: **Frontal Portraits - Pair 85**

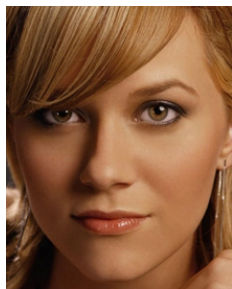


(a) Input Face



(b) Beautified Face

Figure 186: **Frontal Portraits - Pair 86**



(a) Input Face



(b) Beautified Face

Figure 187: **Frontal Portraits - Pair 87**



(a) Input Face



(b) Beautified Face

Figure 188: **Frontal Portraits - Pair 88**



(a) Input Face



(b) Beautified Face

Figure 189: **Frontal Portraits - Pair 89**

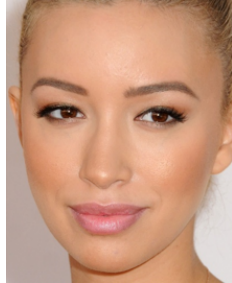


(a) Input Face

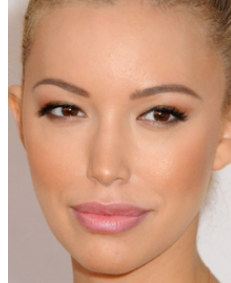


(b) Beautified Face

Figure 190: **Frontal Portraits - Pair 90**



(a) Input Face



(b) Beautified Face

Figure 191: Frontal Portraits - Pair 91



(a) Input Face



(b) Beautified Face

Figure 192: Frontal Portraits - Pair 92



(a) Input Face



(b) Beautified Face

Figure 193: Frontal Portraits - Pair 93



(a) Input Face



(b) Beautified Face

Figure 194: **Frontal Portraits - Pair 94**

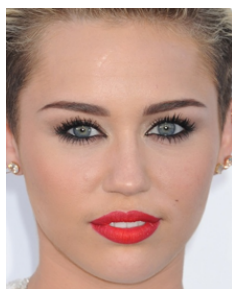


(a) Input Face

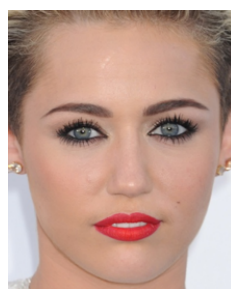


(b) Beautified Face

Figure 195: **Frontal Portraits - Pair 95**

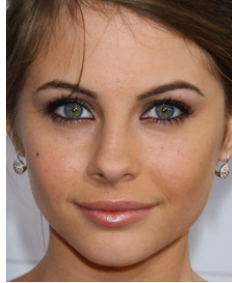


(a) Input Face

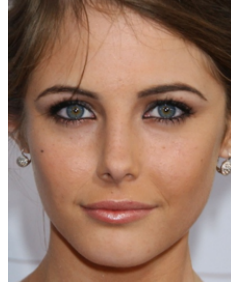


(b) Beautified Face

Figure 196: **Frontal Portraits - Pair 96**

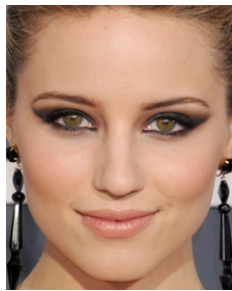


(a) Input Face

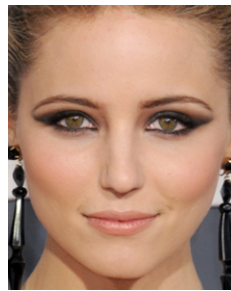


(b) Beautified Face

Figure 197: Frontal Portraits - Pair 97

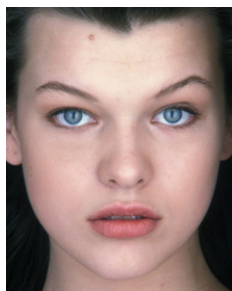


(a) Input Face

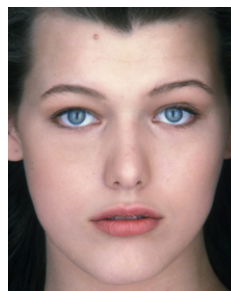


(b) Beautified Face

Figure 198: Frontal Portraits - Pair 98

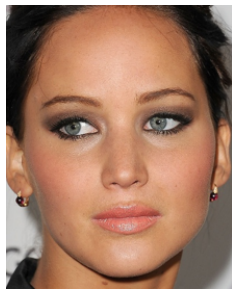


(a) Input Face

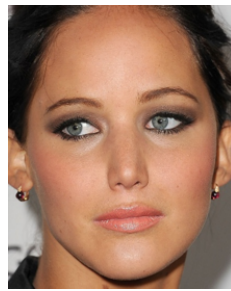


(b) Beautified Face

Figure 199: Frontal Portraits - Pair 99



(a) Input Face



(b) Beautified Face

Figure 200: **Frontal Portraits - Pair 100**