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The Effect of Image Background Color on FRS Performance

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Motivation

- Current face recognition standards recommend a uniform 18% grey background (Griffin, 2006)
- Majority of face recognition implementations do not control background color.
- The impact of background color on FRS performance is not known.

Methodology

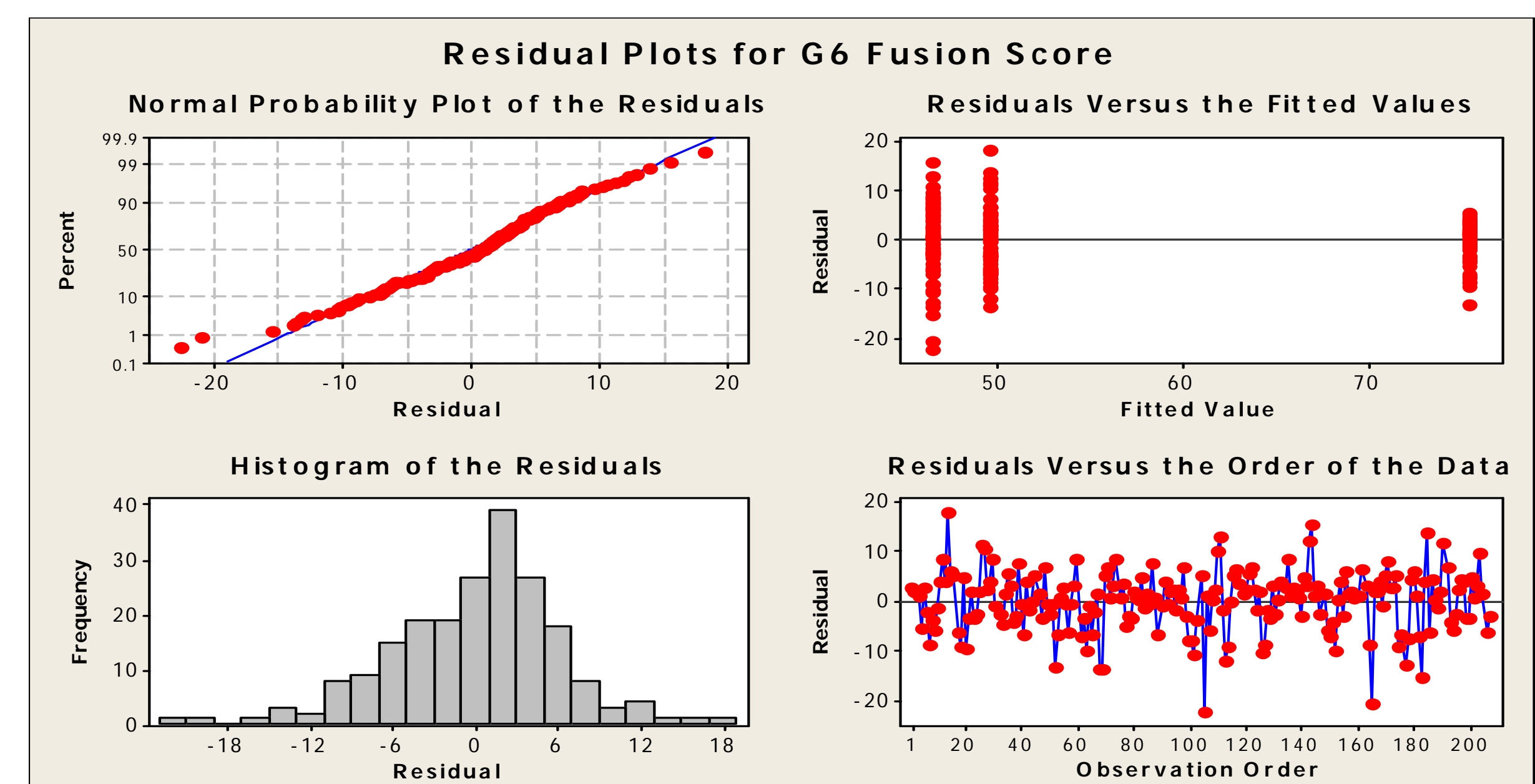
The students were photographed in front of each of three solid backgrounds: Storm grey, Blue, Tech green

Images were analyzed using Identix FaceIT G6
 Commercially available FRS
 Outputs match score that fuses 2 algorithms (Local Feature Analysis, Surface Texture Analysis)

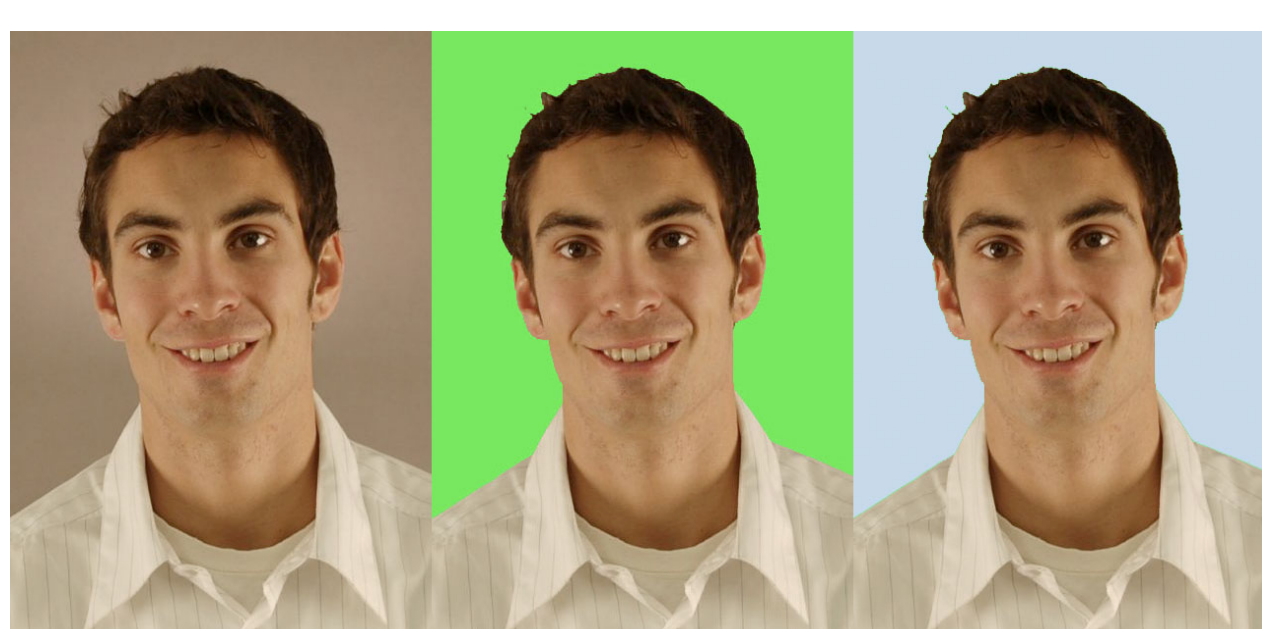
Results

There is a statistically significant difference in match scores across backgrounds
 P-value for Analysis of Variance is less than threshold of 0.05

Background	Images	Mean Score	StDev
Grey	69	75.5	3.98
Blue	69	49.6	6.45
Green	69	46.6	7.56



Facial Image Data



Identix G6 FRS



FRS Output – Match Score

