A Visual Copycat Warning System

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ABSTRACT

The authors propose an approach to determine and quantify consumer confusion between target brands and copycat brands due to the visual similarity of their package designs. The approach has three components. First, image processing techniques are used to prepare different versions of the images of the target and copycat brand packages, and to determine their image similarity based on colors and textures. Second, a perceptual decision task is used to determine the accuracy and speed with which consumers can identify brands from rapidly (100msec) flashed images of their packages. Third, a diffusion model is used to describe the accumulation of evidence on each of the alternative brands during the decision task and to predict accurate brand identification by consumers. This allows the authors to assess and forecast consumer brand confusion as a function of visual features, including various color and texture descriptors, in package designs. The method is applied in a test of brand confusion in fifteen product categories. A three-tiered confusion metric (CCM) is proposed (Copy-Alert, Copy-Warning, Copy-Safe) that can be used as a warning system to identify whether copycat package designs are too close to the target brand, and which visual features account for this.