Impact of Demographics and Skills of the Observer on Visual Inference

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Visual Inference is dependent on the careful evaluation of the lineups by individual observers. Each individual is different in their cognitive phycology and judiciousness which can affect the power of visual inference. To estimate the power of visual inference this can be controlled by getting evaluations from multiple people from a diverse population. But the other factor that may affect the power of visual inference is the demographics and skills of the observer. In this paper we examine this in details. The simulation experiments suggest that individual skill as well as demographics are very significant for the power of visual inference.

Keywords: statistical graphics, lineup, non-parametric test, cognitive phycology, visualization, exploratory data analysis

1. INTRODUCTION

The fundamental concept of visual statistical inference is introduced by Buja et al. (2009) and later these concepts are validated by Majumder et al. (2012).

1.1 Visual Inference

A short introduction of visual inferential procedure.

1.2 Estimation of Power of Visual Inference

Discussion of the methods for estimating the power of visual inference (Majumder et al., 2012).

2. FACTORS AFFECTING THE POWER OF VISUAL INFERENCE

A brief description of the factors that may affect the power of visual inference.

2.1 Choice of Visual Test Statistic

Discuss the effective feature of visual test statistics (Heike et al., 2012). May present some results from *Distance measure* of visual test statistics (Roy Chowdhury et al., 2012).

2.2 Question that Human Observer Faces

2.3 Observer Personality

2.4 Visual Perception of Human Eye

Present the results we have on eye tracking experiment (Zhao et al., 2012).

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