Visual Evaluation Based Analysis in Classroom Environment

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Abstract: To overcome the shortcomings of current classroom evaluation methodologies, a teaching effectiveness evaluation strategy based on computer vision technology is being developed. Attendance is determined by using face detection. The curve fitting approach is used to objectively assess the seat selection distribution. The head-up rate of students raising their heads and good feelings are determined using head posture estimation technology and facial expression recognition technology to assess students’ up or down state and expressions, respectively. Finally, to analyse the teaching effect, a geometric mean function based on attendance, seat attendance detection, head up rate, and the proportion of happy sentiments is provided. The experiment findings show that this method’s evaluation results are quite close to those of teachers and pupils.

Keywords: Computer Vision; Seat Selection Distribution; Attendance; Head Up Rate; Positive Emotion

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