

Facial Recognition of University Entrance Exam Candidates using FaceMatch Software in Iran

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Abstract : In recent years, remarkable advancements in the fields of artificial intelligence and machine learning have led to the development of facial recognition technologies. These technologies are now employed in a wide range of applications, including security, surveillance, healthcare, and education. In the field of education, the identification of university entrance exam candidates has been one of the fundamental challenges. Traditional methods such as using ID cards and handwritten signatures are not only inefficient and prone to fraud but also susceptible to errors. In this context, utilizing advanced technologies like facial recognition can be an effective and efficient solution to increase the accuracy and reliability of identity verification in entrance exams. This article examines the use of FaceMatch software for recognizing the faces of university entrance exam candidates in Iran. The main objective of this research is to evaluate the efficiency and accuracy of FaceMatch software in identifying university entrance exam candidates to prevent fraud and ensure the authenticity of individuals' identities. Additionally, this research investigates the advantages and challenges of using this technology in Iran's educational systems. This research was conducted using an experimental method and random sampling. In this study, 1000 university entrance exam candidates in Iran were selected as samples. The facial images of these candidates were processed and analyzed using FaceMatch software. The software's accuracy and efficiency were evaluated using various metrics, including accuracy rate, error rate, and processing time. The research results indicated that FaceMatch software could accurately identify candidates with a precision of 98.5%. The software's error rate was less than 1.5%, demonstrating its high efficiency in facial recognition. Additionally, the average processing time for each candidate's image was less than 2 seconds, indicating the software's high efficiency. Statistical evaluation of the results using precise statistical tests, including analysis of variance (ANOVA) and t-test, showed that the observed differences were significant, and the software's accuracy in identity verification is high. The findings of this research suggest that FaceMatch software can be effectively used as a tool for identifying university entrance exam candidates in Iran. This technology not only enhances security and prevents fraud but also simplifies and streamlines the exam administration process. However, challenges such as preserving candidates' privacy and the costs of implementation must also be considered. The use of facial recognition technology with FaceMatch software in Iran's educational systems can be an effective solution for preventing fraud and ensuring the authenticity of university entrance exam candidates' identities. Given the promising results of this research, it is recommended that this technology be more widely implemented and utilized in the country's educational systems.

Keywords : facial recognition, FaceMatch software, Iran, university entrance exam

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