

Chapter 11

Facial Recognition Technology: Ethical and Legal Implications

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ABSTRACT

Facial recognition technology (FRT) is a type of biometric technology that uses a digital image of one's face and uses algorithms to match that image in a database. This type of technology has been adopted by individuals when using their mobile devices and automobiles and to access restricted areas or events. FRT has also been adopted by law enforcement and the government to support crime detection and prevention. In addition to the benefits, the associated cyber security problems, legal issues, and ethical challenges of privacy and discrimination are explored. Understanding ethical theories permits the public and decision-makers to make informed choices to influence changes in law to support the changing environment for FRT. Recommended solutions are included along with future research that addresses face connect in automobiles, state law, and ethical comparisons.

INTRODUCTION

Facial Recognition Technology (FRT) is used by social media providers, law enforcement, and private businesses. It impacts the daily existence of American citizens in ways that are both obvious and obscure. Digital cameras are omnipresent in today's society. They are widely available, easy to use, and reasonably priced. Databases that include facial identification information are growing, and the consequences of that stored information can be problematic (Roussi, 2020). A human's face is a unique and reliable indicator of identity (Chen, 2020). FRT leverages that unique data in a variety of ways, ranging from uses that

DOI: 10.4018/978-1-6684-5892-1.ch011

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provide superficial convenience to those that provide profound security to individuals and communities (Chilson & Barkley, 2021). Each and all of these uses raises ethical implications and considerations. In turn, these ethical considerations influence the development of legal policies. It is important for consumers, business owners, employees, and all members of society to understand the fundamental uses of FRT, the ways in which FRT use presents ethical challenges, and how society's collective response to those ethical challenges is shaping the law.

FRT BACKGROUND INFORMATION

Defining FRT

Facial recognition is a biometric technology that combines machine learning and artificial intelligence to “identify, recognize, and interpret images of faces” (Chilson & Barkley, 2021, p. 87; Ivanova & Borzunov, 2020, Kostka et al., 2021). The first phase is facial detection in which a face is detected solo or in a crowd. Next, the facial image is analyzed, examining areas like the distance between the eyes or the distance from the chin to the forehead. Then, the image is converted into a unique numerical code or faceprint. Last, the faceprint is compared to other images that are stored in a database to see if a match exists (Chilson & Barkley, 2021; Kaspersky, n.d.).

History of FRT

FRT is in wide global use today, but the concepts beyond the technology did not emerge until the 1960s. Over the course of the last two decades, the algorithms that drive the technology have developed. During that same period, the cost of cameras has decreased and access to high quality broadband has increased (Keener, 2022). The result is the extensive and daily use of FRT in and across global communities.

Identifying Uses of FRT

FRT is used in both private and public settings to create convenient consumer experiences and safer societal experiences (Chilson & Barkley, 2021). For example, private businesses and individuals use FRT daily to access smartphones, work areas, and automobiles. Businesses regularly use FRT to monitor worksite admission, provide security, and create targeted marketing. Police and government actors also use FRT to assist in crime prevention and law enforcement (Summa Linguae Technologies, 2021). The general public has grown reliant on the convenience, accuracy, and safety that many of these uses provide. At the heart of each of these measures is the uniquely identifiable human face, and its image that is captured in a moment.

CURRENT SOCIETAL ISSUES RESULTING FROM FRT USE

Having identified what FRT is and some primary ways of its use, consideration of the impact of that use in the context of security, privacy, and discrimination is necessary. Such use is constantly evolving as is its resultant impact. A discussion of some current issues follows.

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