

P7013

Submitter Email: johnchavens@gmail.com

Type of Project: New IEEE Standard

PAR Request Date: 15-Feb-2018

PAR Approval Date: 14-May-2018

PAR Expiration Date: 31-Dec-2022

Status: PAR for a New IEEE Standard

1.1 Project Number: P7013

1.2 Type of Document: Recommended Practice

1.3 Life Cycle: Trial Use

2.1 Title: Inclusion and Application Standards for Automated Facial Analysis Technology

3.1 Working Group: Working Group on Benchmarking Accuracy, Increasing Transparency, and Governing Use of Automated Facial Analysis Technology (SSIT/SC/Face WG)

Contact Information for Working Group Chair

Name: Joy Buolamwini

Email Address: joyab@mit.edu

Phone: 4083570915

Contact Information for Working Group Vice-Chair

None

3.2 Sponsoring Society and Committee: IEEE Society on Social Implications of Technology/Social Implications of Technology Standards Committee (SSIT/SC)

Contact Information for Sponsor Chair

Name: Victoria Hailey

Email Address: vhailey.iso@gmail.com

Phone: 416-410-3400

Contact Information for Standards Representative

None

4.1 Type of Ballot: Individual

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 07/2019

4.3 Projected Completion Date for Submittal to RevCom

Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.: 02/2020

5.1 Approximate number of people expected to be actively involved in the development of this project: 20

5.2 Scope: The standard provides phenotypic and demographic definitions that technologists and auditors can use to assess the diversity of face data used for training and benchmarking algorithmic performance, establishes accuracy reporting and data diversity protocols/rubrics for automated facial analysis, and outlines a rating system to determine contexts in which automated facial analysis technology should not be used.

5.3 Is the completion of this standard dependent upon the completion of another standard: No

5.4 Purpose: Research continues to show that artificial intelligence which is used for automated facial analysis is susceptible to bias that can exacerbate human prejudice and systematically disadvantage individuals based on gender, ethnicity, age, and other factors.

The purpose of the standard is to provide inclusion guidelines for developing and benchmarking automated facial analysis technology to mitigate demographic and phenotypic bias and discrimination.

The reporting rubrics/protocols established in this standard serve to increase transparency of this automated technology so that developers and decision makers can compare available options to choose the most appropriate technology based on target populations and intended use cases. Given the sensitivity of the biometric data provided from a human face, the standard also delineates appropriate and inappropriate uses of automated facial analysis based on accuracy and values established by a global community.

5.5 Need for the Project: Though automated facial analysis technology is increasingly used by law enforcement and in consumer products that reach diverse populations, there are no universally accepted performance standards in place to govern its accuracy and use. Inaccurate results and the misuse of automated facial analysis has already lead to covert discriminatory practices and overt exclusionary experiences. As facial

analysis technology becomes further embedded into daily life, ensuring accurate performance across a rich spectrum of phenotypic and demographic groups will require ongoing monitoring to addressing bias in data and algorithmic performance.

5.6 Stakeholders for the Standard: The primary stakeholders are engineers, technologists, and researchers who develop automated facial analysis technology; procurement officers, auditors, and other decision-makers who assess the suitability of using these technologies in a given context: and the public at large.

Intellectual Property

6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No

6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

7.1 Are there other standards or projects with a similar scope?: No

7.2 Joint Development

Is it the intent to develop this document jointly with another organization?: No

8.1 Additional Explanatory Notes: