GARGI



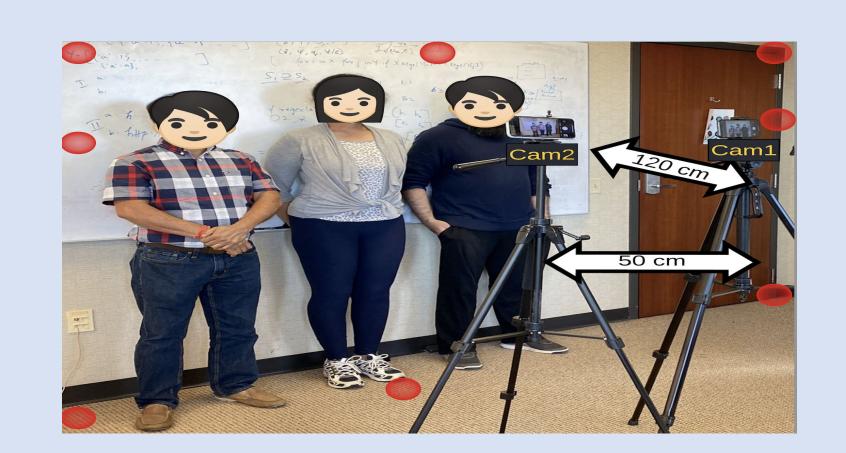
Selecting Gaze-Aware Representative Group Image from Live Photo



Omkar N. Kulkarni, Shashank Arora, Pradeep K. Atrey, {onkulkarni, sarora3, patrey}@albany.edu Albany Lab for Privacy and Security (ALPS), Department of Computer Science, College of Engineering and Applied Sciences, University at Albany, SUNY

INTRODUCTION

Do you take live photos in group setting?



 Are you happy with the representative image selected for that live photo?

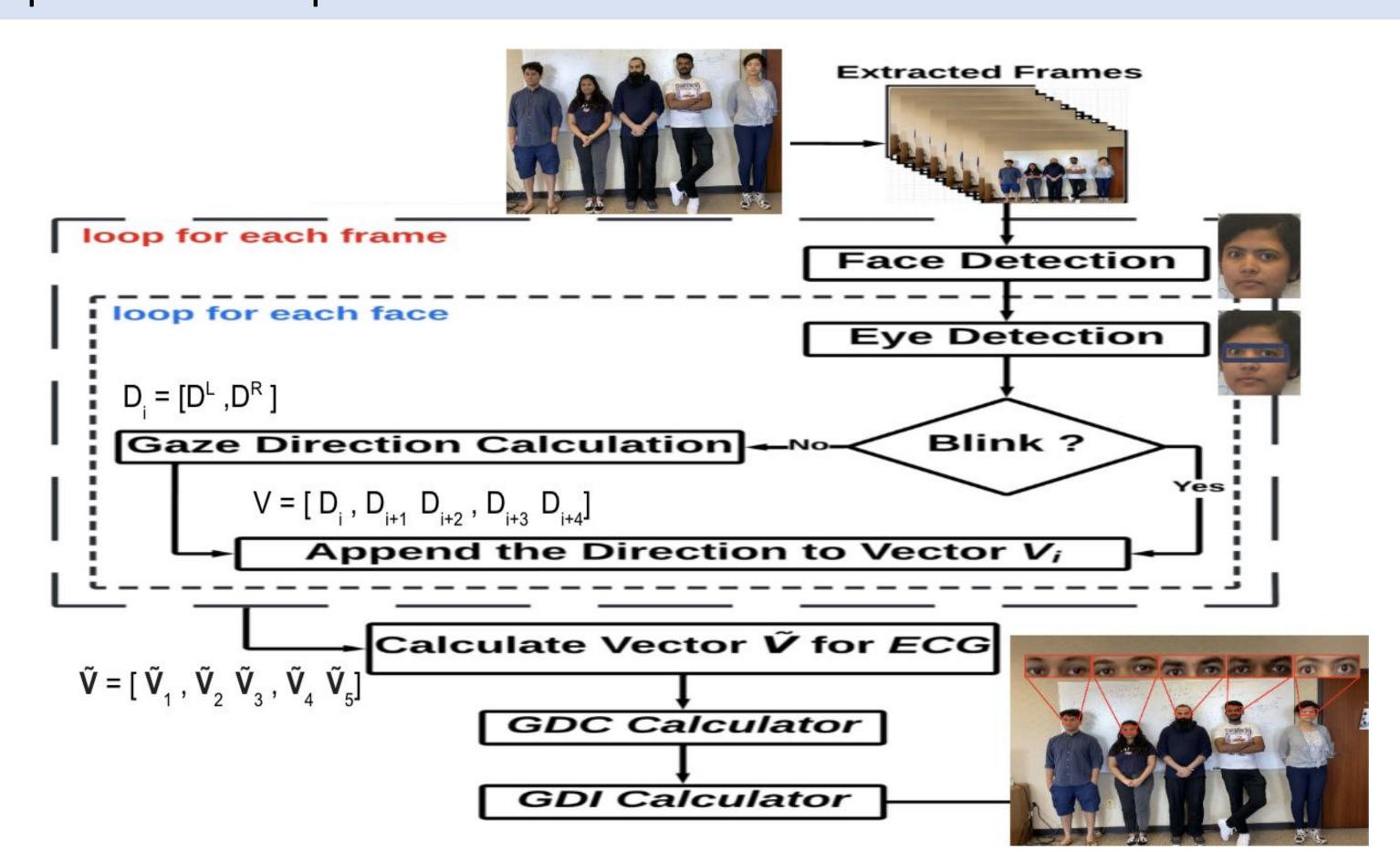


What is a Representative Image?

- Thumbnail selected based on array of images
- What you see when live picture is not running
- User can manually change the representative image

METHODOLOGY

- Gaze Aware Group Representative Image (GARGI) is defined as the aesthetically better representative key image for a live photo that has the least Gaze Deviation Index (GDI)
- **GDI** is a measure of cumulative deviation (*GDC*) of the gaze for all the subjects in a group live photo with respect to the Expected Collective Gaze (*ECG*)
- GDC is the measure of gaze deviation for individual subject in a frame
- ECG is the collective gaze direction where all the subjects in a live group photo were expected or intended to look



RESULTS Live images with 4 subjects Live images with 5 subjects Live images with 6 subjects -GARGI -APPLE Inc Ĕ o.4 ₹ 0.2 40 10 Live Images 8.0 <u>&</u> -GARGI -APPLE Inc. <u>=</u> 0.6

EXAMPLES

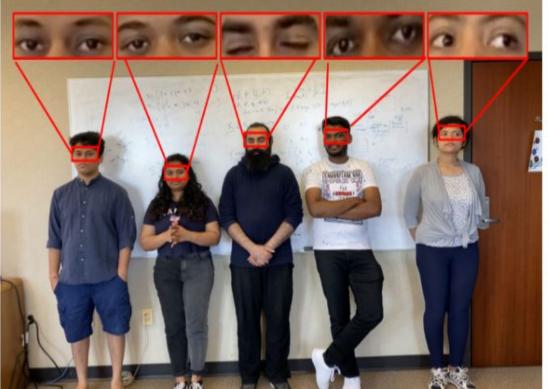
DATASET

Self Curated Live Photo Dataset

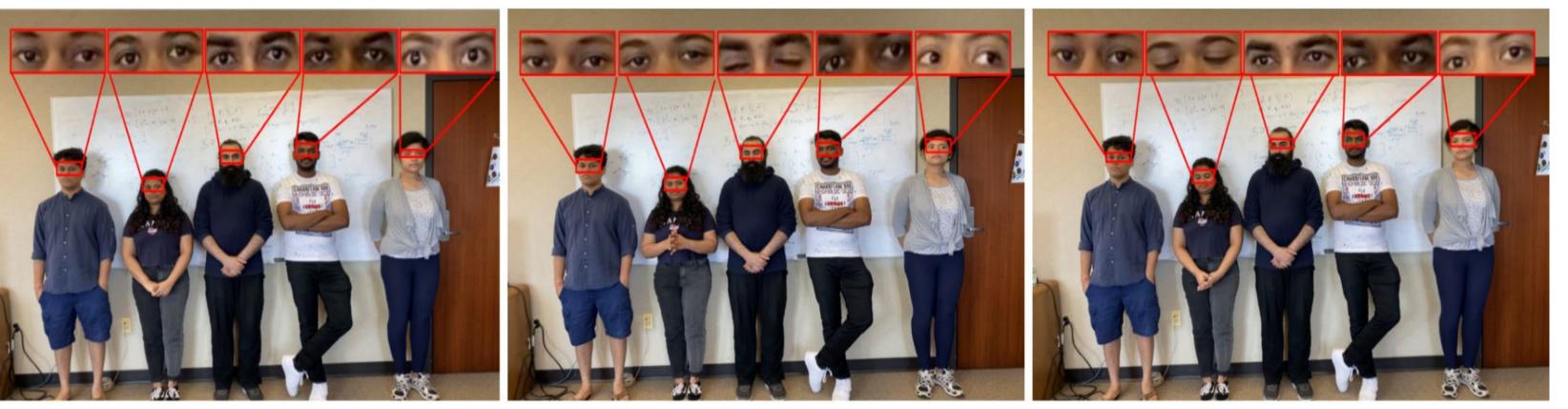
IRB Exempt

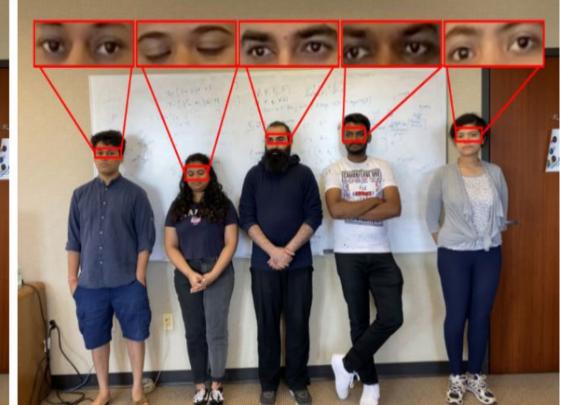
Face count ranges from 1 to 6

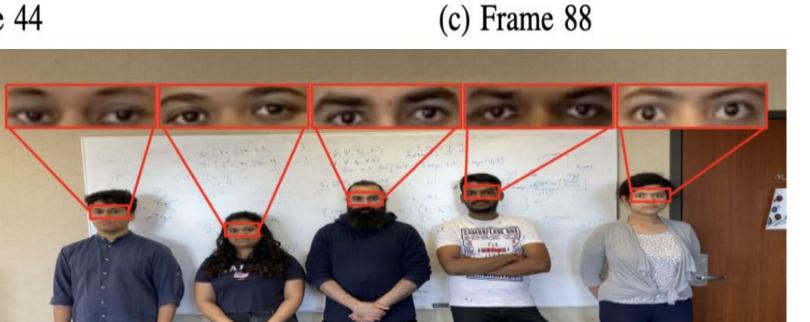
(a) Frame 0

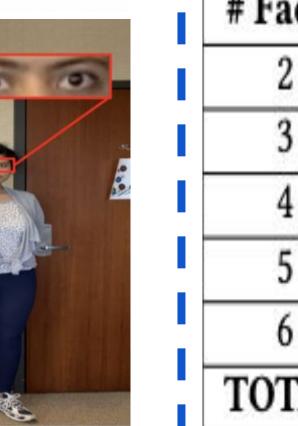


(b) Frame 44

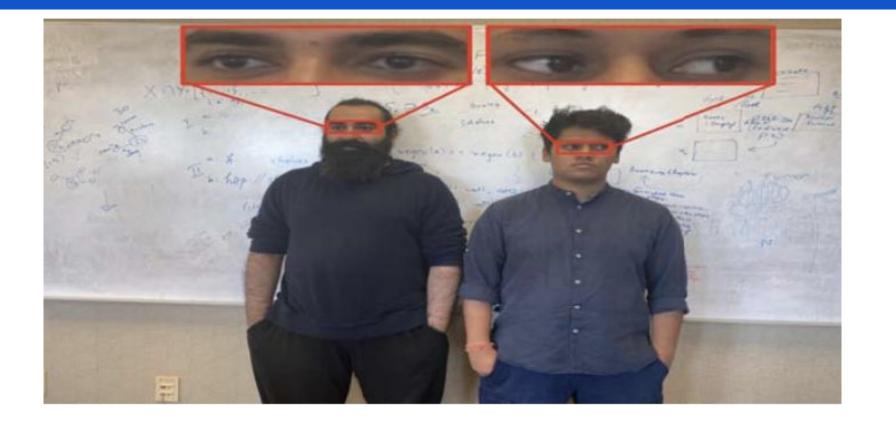






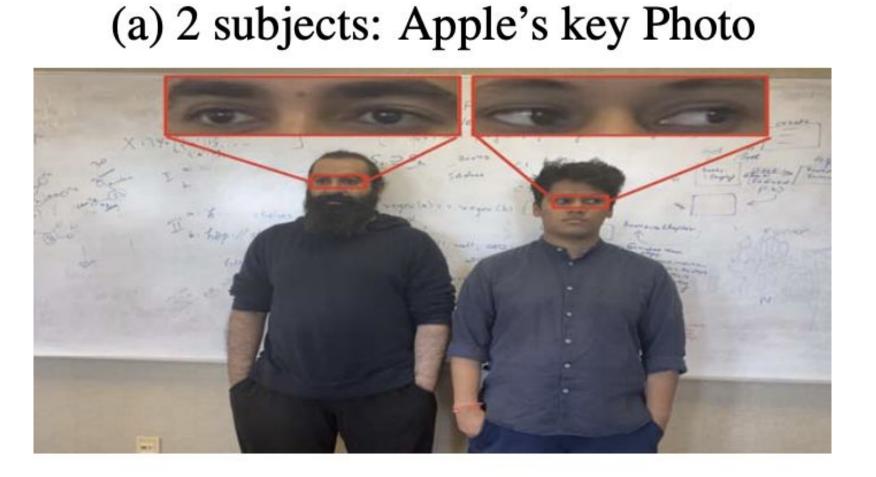


Live Images | # Frames | Avg. # Frames # Faces 4374 50 4487 50 50 4486 88 50 4384 4227 50 TOTAL 250 21958



50

viation 6.0



(d) 2 subjects: GARGI



200

250

150

Live Images

(b) 3 subjects: Apple's key Photo



(e) 3 subjects: GARGI

(d) Key photo by Apple

(e) GARGI