



Initials: _____ Date: _____

Institutional Review Board

1204 Marie Mount Hall • 7814 Regents Drive • College Park, MD 20742 • 301-405-4212 • irb@umd.edu

CONSENT TO PARTICIPATE

Project Title	<i>Vigilant: Three-Point High Risk Driver Detection Using Convolutional Neural Network</i>
Purpose of the Study	<p><i>This research is being conducted by Mohammad Nayeem Teli at the University of Maryland, College Park. This study examines the extent to which distracted driving can be measured from facial expressions, body activity, and eye movement. Through the use of several cameras, machine learning algorithms will take real-time data and detect whether a user is distracted: reaching out to the back, talking to the passengers, fiddling with the radio, texting, talking on the phone, fidgeting with hair or makeup, yawning, and / or feeling drowsy. In order to develop these algorithms, we need your help in obtaining this data.</i></p> <p><i>The use of this application has the potential to reduce numerous car accidents caused by distraction and drowsiness. In 2017, “91,000 police-reported crashes involved drowsy drivers. These crashes led to an estimated 50,000 people injured and nearly 800 deaths according to the National Highway Traffic Safety Administration” (NHTSA, 2017). This number is substantial yet many cars are not equipped with technology to see this. Our goal is to make this system accessible to all through the use of a monitoring device that would record and alert a distracted driver.</i></p>

<p>Procedures</p>	<p><i>Using a camera on a cellphone or a laptop, you will record yourself performing a sequence of actions in a parked car while seated in the driver seat and pretending to be driving. These actions are described in the instructions at http://www.cs.umd.edu/~nayeem/distracteddriver/. You are asked to perform these actions while saying a few sentences and in some cases, yawning. On the website we demonstrate the actions that you would record. Each of these actions would take roughly half a minute. All ten actions should take around 5 - 10 minutes. Some of the actions that you would be performing are:</i></p> <p><i>Action 1: Texting while driving (phone in left hand)</i></p> <p><i>Action 2: Texting while driving (phone in right hand)</i></p> <p><i>Action 3: Talking On the phone (phone in left hand)</i></p> <p><i>Action 4: Talking On the phone (phone in right hand)</i></p> <p><i>Action 5: Adjust the radio/center console</i></p> <p><i>Action 6: Grabbing something from the back of the car</i></p> <p><i>Action 7: Yawning while driving</i></p> <p><i>Action 8: Driving without talking (Safe driving)</i></p> <p><i>Action 9: Talking while driving</i></p> <p><i>Action 10: Passed out</i></p> <p>NOTE: These ten actions are to be performed in a parked car, pretending to be driving and NOT while driving.</p> <p>Once the data has been collected, you simply need to upload the video files to a google drive and share them with nayeem@umd.edu</p> <p>As a token of appreciation we will send you car phone holder for your participation in this research.</p>
<p>Potential Risks and Discomforts</p>	<p><i>There are no known risks from participating in this research study.</i></p> <p><i>These ten actions presented in procedures above are to be performed in a parked car, pretending to be driving and NOT while driving.</i></p>
<p>Potential Benefits</p>	<p><i>This is a unique dataset that we are collecting and your participation will help train a Convolutional Neural Network based system. This realtime system could potentially save hundreds of lives since the system would alert a distracted driver before anything dangerous takes place.</i></p>

<p>Confidentiality</p>	<p><i>Any potential loss of confidentiality will be minimized by storing in a secure private drive. We will retain this data for future research purposes as well and therefore keep it. Even though you are asked to record the videos, we are not going to associate your name, email or any other identifiable information with the videos that we store. We plan on using some of the frames/images from these videos in publications of the work in conferences and journals.</i></p> <p><i>However, when we write a report or article about this research project, your identity will be protected to the maximum extent possible. Your information may be shared with representatives of the University of Maryland, College Park or governmental authorities if and only if you or someone else is in danger or if we are required to do so by law.</i></p> <p><i>This data will be accessed by a graduate student, Sameer Pusegaonkar, two undergraduate students, HyeKang Joo, and , Alex Hsieh and I. In the future we will share it with other researchers. In the consent form you have the option to limit access to your data, which includes use of your data: just for this research, in publications or sharing it with other researchers. You may pick any or all of these options if you would like to take part in this research project.</i></p> <p><i>In order to send you the gift, we will need your email address.</i></p>
<p>Right to Withdraw and Questions</p>	<p><i>Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify. If you are an employee or student, your employment status or academic standing at UMD will not be positively or negatively affected by your participation or non-participation in this study.</i></p> <p><i>If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the investigator:</i></p> <p style="text-align: center;">Mohammad Nayeem Teli 1128 Brendan Iribe Center for Computer Science and Engineering nayeem@umd.edu 3014050405</p>

<p>Participant Rights</p>	<p><i>If you have questions about your rights as a research participant or wish to report a research-related injury, please contact:</i></p> <p style="text-align: center;">University of Maryland College Park Institutional Review Board Office 1204 Marie Mount Hall College Park, Maryland, 20742 E-mail: irb@umd.edu Telephone: 301-405-0678</p> <p><i>For more information regarding participant rights, please visit:</i> https://research.umd.edu/irb-research-participants</p> <p><i>This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.</i></p>	
<p>Statement of Consent</p>	<p><i>Your signature indicates that you are at least 18 years of age; you have read this consent form or have had it read to you; your questions have been answered to your satisfaction and you voluntarily agree to participate in this research study. You will receive a copy of this signed consent form.</i></p> <p><i>If you agree to participate, please check the box(es) and sign your name below.</i></p> <p><i>I would like to have my facial data used for this research:</i></p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p><i>I would like to have my facial data used on academic publications resulting from this research:</i></p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p><i>I would like to have my facial data published online to be shared with other researchers:</i></p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	
<p>Signature and Date</p>	<p>NAME OF PARTICIPANT [Please Print]</p>	
	<p>SIGNATURE OF PARTICIPANT</p>	
	<p>DATE</p>	

Initials: _____ Date: _____