Hello:

I am writing to see if you would like to participate in research we are conducting. We are conducting an **online study** examining which PIN entry layouts work well for eye gaze trackers. In order to test this, we would like people with Upper Extremity Impairment (UEI) who use eye gaze trackers regularly to participate. A person with UEI is anyone without full use or range of motion of their arms, shoulders, or hands. Participants will be asked to try typing PINs into various layouts in order to determine which ones work well. We would also like to ask participants a few questions about their experiences in using the different layouts.

The details of this research are as follows:

**Principal Investigator:** Krishna Venkatasubramanian, PhD.

**Research purpose:** The **purpose of this research** is to find out which PIN entry layouts work well for eye gaze trackers.

**Protocol:**  This is an online study. The research is virtual/participants will be visiting a website to participate.

Each participant will be asked to visit a research website where they will randomly be assigned one of the three PIN layouts.

* The participant will be provided with an image of the PIN layout in order to familiarize themselves with the layout
* For each of 10 PINs
  + The participant will be shown the PIN on screen and given however much time is needed to memorize the PIN
  + The participant will be asked to enter the PIN; the PIN will appear on the side of the screen for reference
  + They will be given multiple attempts if a mistake in entry is made to enter the PIN
* The participant will repeat this process with one of the other layouts again randomly chosen
* They will then repeat this with the final PIN layout

All of the PINs will be randomly generated. At no point will any of the participants be asked to enter sensitive information or PINs that they use. Any data collected during the familiarization phase will be discarded.

**Benefits:** Participants will be compensated for their time. Their input would help us build better PIN entry layouts for people who use eye gaze trackers.

**Eligibility:** Participants for this research are people with upper extremity impairment (UEI) who are regular eye gaze tracker users. Someone with an upper extremity impairment is anyone without full use or range of motion of their hands, arms, or shoulders.

**Time commitment:** 45-60 minutes

**Location:** Premisis of the participant

**Compensation:** Each participant will be compensated for their time with a $10 gift card.

This research has been approved by The University of Rhode Island Institutional Review Board. Please let me know if anyone is interested in participating.

Thanks

Krishna Venkatasubramanian

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