

## CONSENT TO TAKE PART IN RESEARCH

XXXX

*Study title: User-device interaction study*

*Principal Investigator: XXXX*

**You are being asked to take part in a research study. Taking part in research is voluntary.**

Your decision whether or not to take part will have no effect on *academic standing and/or job status*. Please ask questions if there is anything about this study you do not understand.

### **What is the purpose of this study?**

The purpose of the study is to understand how users interact with their devices, e.g., frequency of typing, using mouse/trackpad on laptop, frequency of using their smartphone/tablet, how they hold their smartphone/tablet, how often they lock/unlock their devices, etc. We are developing an authentication method based on user-device interactions, and the data collected from this study will improve our understanding of how users' interact with their devices, and help us in improving the accuracy and reliability of our scheme. We are developing an authentication scheme that is simple, easy to perform, and does not interfere with people's workflow; it is more usable than password-based or pin-based authentication. We are developing an authentication scheme that is simple, easy to perform, and does not interfere with people's workflow; it is more usable than password-based or pin-based authentication.

### **Will you benefit from taking part in this study?**

You will not personally benefit from being in this research study. We hope to gather information that may help people in the future.

### **What does this study involve?**

Your participation in this study may last up to 7 days. With your consent we will install an app on your smartphone, laptop, and/or desktop. The app will passively monitor your device usage, specifically, how often you lock/unlock your device (smartphone, laptop, and/or desktop), how long you use your device, how much you interact with the device (e.g., mouse clicks, keystrokes, taps, swipes), and your smartphone movements. The app does not collect any sensitive information such as what you type or what you see on the device screen.

If you use a smartwatch, with your consent, we will install an app on your smartwatch that passively collects motion data (i.e., from accelerometer and gyroscope sensors) from your smartwatch when you are using your smartphone, laptop, and/or desktop.

*If you do not use a smartwatch, but are willing to wear a wrist device, we will loan you a smartwatch or a wrist bracelet (called Shimmer) for the duration of the study. You should return the device to us after the study in working condition. If you lose or break the device we may ask you to pay for the device.*

At the start and end of the study we will conduct a short interview or a survey, asking you about your device usage and getting your feedback on the study.

**What are the options if you do not want to take part in this study?**

Participation is voluntary; hence you can withdraw from the study at any time. Please do not sign the consent form if you do not want to take part in the study. Once enrolled in the study, you can withdraw from the study anytime by contacting us.

**If you take part in this study, what activities will be done only for research purposes?**

If you take part in this study, the following activities will be done only for research purposes: collection of device usage data from your device (smartphone, laptop, and/or desktop), collection of wrist movement data when using a computer or mobile device, inputs to the computer/device via keyboard/touchscreen and mouse/touchpad (without recording the specific keys typed or a record of anything on the screen), and your responses to a brief survey and short interview conducted during the study.

**What are the risks involved with being enrolled in this study?**

No risks are expected.

**Other important items you should know:**

- **Leaving the study:** You may choose to stop taking part in this study at any time. If you decide to stop taking part, it will have no effect on the *academic standing and/or job status*.
- **Number of people in this study:** We expect XX people to enroll in this study.
- **Funding:** XXXX provides funding to XXXX for this research.
- **Product Development:** If the results of this research are used to develop a product sold for a profit, you will not share in the profit. You will not receive money from the profits.

**How will your privacy be protected?**

The information collected as data for this study includes:

For smartphones, our app collects following information:

- Time when a phone is locked and unlock, and when the phone screen turns on and off
- Number and timing of touch events on the smartphone
- Number and timing of keystrokes on the smartphone
- Accelerometer and gyroscope sensor data when the smartphone is in use and 1 minute prior to unlocking the smartphone

For Apple computers (laptop or desktop), our app collects following information:

- Time when a phone is locked and unlock, and when the phone screen turns on and off
- Number and timing of mouse events (mouse move, mouse scroll, mouse click)
- Number and timing of keystrokes

And during our interviews or survey before and after the study we will collect demographic data such as age, gender.

We value your privacy. The app will not collect any identifiable or private information about you. The keyboard usage metadata that we collect does not reveal what you type because we do not record which keys you type on the keyboard. We record no information displayed on the screen.

We are careful to protect the identities of the people in his study. We also keep the information collected for this study secure and confidential. All data collected will contain no identifiable information and only researchers will have access to the data. All data will be stored on secure, password-protected computers, and hard copies (including this consent form) will be stored in the researcher's office in a locked filing cabinet when not in use.

The information collected for this study will be used only for purposes of research as stated earlier in this form. Research data may be shared with officials of XXXX and others involved in the oversight of this study as permitted by law.

It is possible for a court or government official to order the release of study data including information about you.

**Will you be paid to take part in this study?**

(Depending on the compensation policy we choose to use, see study plan, we will use either answer 1, or 2 and 3 for this question in our consent form)

1. No. There is no monetary compensation for the study.
2. Yes. You can choose to receive either a fixed daily compensation for the duration of the study or take part in a \$XX raffle. The fixed daily compensation is XX/day and you can receive up to \$XX. If you also provide data from your wrist wearable then you daily compensation is \$XX/day and up to \$XX. To be eligible for a day's compensation you should provide data for at least 10 hours and if you receive a survey during the study, you should complete that survey, otherwise you will not receive any compensation for the day. If you choose to opt for a raffle, you name will be added to a lottery. To be eligible for the lottery you should complete the study (i.e., including any given surveys) for at least 7 days. If you fail to provide 7 days data you will be automatically removed from the lottery and will receive fixed compensation as described above. We will chose

one participant from the lottery at the end of the study, and the participant will receive \$XX gift card at a store of the participant's choice.

3. If you are enrolled in the course XXXX\* you can choose to receive extra credits instead of the monetary compensation mentioned above. For 7-days participation in the study you will receive 1% extra credit on your final grade.\*\*

*\* The list of courses in which students can receive extra credit is subject to change, depending on the term and approval from the course instructor.*

*\*\* The percentage of extra credits are subject to change, depending on the course instructor.*

### **Whom should you call with questions about this study?**

If you have questions about this study or concerns about a research related injury, you can call the principal investigator for this study: XXXX at XXX-XXX-XXXX during normal business hours or email us.

If you have questions, concerns, complaints, or suggestions about human research at XXXX, you may call the Office of the Committee for the Protection of Human Subjects at XXX-XXX-XXXX during normal business hours.

### **CONSENT**

I have read the above information about *User-device interaction study*. I agree to take part in this study.

Date:

Participant's Name:

Participant's Email address: