IRB Template

1. General Information

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| 1A. | What is the full title of the research protocol?  Survey Automation Detection Methods and its Implications on Psychological Research |
| 1B. | Abstract/Summary  Please provide a brief description of the project (no more than a few sentences).  The current project aims to develop survey automation detection methods for online data collection platforms, such as Amazon’s Mechanical Turk (MTurk). Participants will take surveys in multiple ways, including honest answers to existing surveys, providing pure random answers, and by utilizing a chrome extension plug in that automatically fills in survey answers. These will then be compared to develop detection methods for survey automation software. A survey will also be placed on MTurk for participants to fill out. This survey version will be screened to investigate the prevalence of automated data in MTurk’s participant pool. |
| 1C. | Who is the Principal Investigator?  *This MUST be a faculty or staff member.*  Erin M. Buchanan, Ph.D. |
| 1D. | Who is the primary study contact?  *This person may be the Principal Investigator or someone else (faculty, staff, or student).  This person, in addition to the PI, will be included on all correspondence related to this project.*  Erin M. Buchanan, Ph.D. |
| 1E. | Select the Co-Principal Investigator(s).  *This MUST be a faculty or staff member.  Persons listed as Co-PIs will be required to certify the protocol (in addition to the PI).  This person will also be included on all correspondence related to this project.*  NA |
| 1F. | Select the Investigator(s).  *An investigator may be faculty, staff, or student.*    NA |

1. Research Protocol

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| 2A. | | Describe the proposed project in a manner that allows the IRB to gain a sense of the project including:   * *the research questions and objectives,* * *key background literature (supportive and contradictory) with references, and* * *the manner in which the proposed project will improve the understanding of the chosen topic.*   Web-based data collection methods such Amazon’s Mechanical Turk (MTurk) are an appealing option to recruit participants quickly and cheaply for psychological research. While concerns regarding data quality have emerged with MTurk, several studies have exhibited that data collected via MTurk are as reliable as traditional college samples and are often more diverse and representative of noncollege populations. The development of participant screening methods, however, has been less explored. Omitting participants based on simple screening methods, such as response time or attention checks may not be adequate identification methods, with an inability to delineate between real or fake participants. An alternative form of suspicious survey responses stem not from human participants, but from survey automation techniques such as survey bots or automated form fillers. The current project develops survey automation detection (SAD) methods while overcoming previous screening limitations. Multiple checks will be employed, such as response time, skewness and kurtosis values, and the number of utilized choices from a given range of scale options. This method will be tested on a survey taken with an easily available plug-in survey bot, as well as compared to data collected by human participants providing both real and randomized answers. An R function will be proposed for researchers to screen for potential problems with MTurk data. A survey will then be placed on MTurk for an existing survey. Data will then be analyzed to investigate the prevalence of automated data in MTurk’s participant pool. Identified cases can then be used as part of sensitivity analyses to warrant exclusion from further analyses. SAD methods can be a promising tool to identify non-real or automated data via MTurk or other online data collection platforms. | | |
| 2B. Check all research activities that apply: | | |  |
|  | Audio, video, digital, or image recordings | |

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|  | Biohazards (e.g., rDNA, infectious agents, select agents, toxins) |
|  | Biological sampling (other than blood) |

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|  | Blood drawing |
|  | Class Protocol (or Program or Umbrella Protocol) |

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|  | Data, not publicly available |
|  | Data, publicly available |

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|  | Deception |
|  | Devices |

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|  | Diet, exercise, or sleep modifications |
|  | Drugs or biologics |

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|  | Focus groups |
|  | Internet or email data collection |

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|  | Materials that may be considered sensitive, offensive, threatening, or degrading |
|  | Non-invasive medical procedures |

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|  | Observation of participants |
|  | Oral history |

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|  | Placebo |
|  | Record review |

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|  | Specimen research |
|  | Surgical procedures |

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|  | Surveys, questionnaires, or interviews (one-on-one) |
|  | Surveys, questionnaires, or interviews (group) |

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|  | Other |

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| 2C. | Describe the procedures and methods planned for carrying out the study.  Make sure to include the following:   * *site selection,* * *the procedures used to gain permission to carry out research at the selected site(s),* * *data collection procedures,* * *and an overview of the manner in which data will be analyzed.*   Provide all information necessary for the IRB to be clear about **all** of the contact human participants will have with the project.  Participants will be recruited through the SONA system and through manual recruitment from undergraduate classes. Participants will also be recruited online via Amazon Mechanical Turk. All participants will receive and complete an informed consent document before participation, and an online description of the study will be placed online at Amazon Mechanical Turk. All data will be collected with a survey using Qualtrics. Participants recruited at Missouri State University will take the survey online either using a personal computer, or in a laboratory setting using university computers. Participants recruited via Mechanical Turk will complete the online survey from their personal computers. Participants will take the survey three times (in a random order), which will be a valid response to a survey, taking the survey by placing random answers, and taking the survey by using a chrome extension plug in. Data will be analyzed by checking response time, skewness and kurtosis values, and the number of utilized choices from a given range of scale options from survey responses. This information will be used to generate a detection function. Responses will be compared between actual responses, random responses, and form filler responses to note any changes in response times, skewness, and kurtosis. The detection function will then be utilized for MTurk participants to identify the rate of automated responses. The Resiliency Scale 14 will be used as the real questions in the study.  (attached RS14 scale). |

1. Participants

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| 3A. | | Specify the participant population(s). Check all that apply. |
|  | Adults |

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|  | Children (<18 years) |
|  | Adults with decisional impairment |

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|  | Non-English speaking |
|  | Student research pools (e.g. psychology) |

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|  | Pregnant women or fetuses |
|  | Prisoners |

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|  | Unknown (e.g., secondary use of data/specimens, non-targeted surveys, program/class/umbrella protocols) |
| 3B. | Specify the age(s) of the individuals who may participate in the research.  All individuals will be over the age of 18, but there is no maximum cutoff for age. | | |
| 3C. | Describe the characteristics of the proposed participants, and explain how the nature of the research requires/justifies their inclusion.  Participants recruited at Missouri State University will be male and female undergraduate students above the age of 18, and the nature of the research requires their inclusion to initially explore characteristics between automated survey responses, random responses, and honest responses to help develop an automated survey detection function. Participants recruited via Mechanical Turk will be over the age of 18, but no other constraints will be placed on inclusion. | | |
| 3D. | Provide the total number of participants (or number of participant records, specimens, etc.) for whom you are seeking Missouri State IRB approval.  The current project will aim to include up to 100 participants from Missouri State University, and will aim to include up to 1,000 participants from Mechanical Turk. | | |
| 3F. | Estimate the time required from each participant, including individual interactions, total time commitment, and long-term follow-up, if any.  The total time for this experiment should not exceed 15 minutes. There is no other time commitment or long-term follow up. | |
| 3G. | Describe how potential participants will be identified (e.g., advertising, individuals known to investigator, record review, etc.). Explain how investigator(s) will gain access to this population, as applicable.  Postings will be placed through SONA, advertisements in classroom settings, and postings on Amazon Mechanical Turk. | |
| 3H. | Describe the recruitment process; including the setting in which recruitment will take place. Provide copies of proposed recruitment materials (e.g., ads, flyers, website postings, recruitment letters, and oral/written scripts).  Postings will be placed on SONA/Blackboard/Email and Amazon Mechanical Turk. This posting will briefly describe the nature of the experiment (all aspects of this description can be found in the consent form attached to this application). | | |
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| 3I. Will participants receive compensation or other incentives (e.g., free services, cash payments, gift certificates, parking, classroom credit, travel reimbursement, etc.) to participate in the research study?  Yes | |  |

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| Describe the incentive, including the amount and timing of all payments.  Participants recruited through SONA would receive course credit or extra credit, depending on what course the student was enrolled. Participants recruited through Mechanical Turk will be compensated up to $0.50 for their participation. |

1. Informed Consent

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| 4A. | | From the list below, indicate how consent will be obtained for this study.  *Check all that apply.* |
|  | Written/signed consent by the subject | |

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|  | Written/signed consent (permission) for a minor by a Parent or Legal Guardian |
|  | Written/signed consent by a Legally Authorized Representative (for adults incapable of consenting). |

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|  | Request for Waiver of Documentation of Consent (e.g. Verbal Consent) |
|  | Waiver of parental permission |

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|  | Consent will not be obtained from subjects (Waiver of Consent) |
| 4B. | Describe the consent process including where and by whom the subjects will be approached, the plans to ensure the privacy of the subjects and the measures to ensure that subjects understand the nature of the study, its procedures, risks and benefits and that they freely grant their consent.  All participants will receive and complete an informed consent sheet before participation in the experiment occurs. The informed consent sheet will explain the nature of the project, risks and benefits pertinent to the participant, and will ensure anonymity of participant responses. | |

1. Risks and Benefits

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| 5A. | Describe all reasonably expected risks, harms, and/or discomforts that may apply to the research.  Discuss severity and likelihood of occurrence.  *Consider the range of risks - physical, psychological, social, legal, and economic.*  Risks are minimal for this experiment, and participants can quit the experiment at any time. |
| 5B. | Describe the steps that will be taken to minimize risks and the likelihood of harm.  Participants will be informed that they are free to quit the experiment at any time if they feel it necessary. |
| 5C. | List the potential benefits that participants may expect as a result of this research study.  State if there are no direct benefits to individual participants.  There are no direct benefits to individual participants recruited from Missouri State University other than course or extra credit. Benefits to Mechanical Turk participants include compensation up to $0.50. |
| 5D. | Describe any potential indirect benefits to future subjects, science, and society.  This experiment will help develop more stringent methodology in online data collection, and will serve to help increase the quality of obtained scientific or experimental data. |
| 5E. | Discuss how risks to participants are reasonable when compared to the anticipated benefits to participants (if any) and the importance of the knowledge that may reasonably be expected to result.  The benefits, which include compensation/extra credit, and a beneficial addition to research methodology outweigh the minimal risks, which might include boredom concerning the research task. |

1. Data Collection

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| 6A. | How will the data for this study be collect/stored?  *Check all that apply.* |
| 6B. | Describe where the data will be stored (e.g., paper forms, flash drives or removeable media, desktop or laptop computer, server, research storage area network, external source).  Data will be stored on a password protected laptop computer, as well as on a password protected Microsoft One Drive account. |
| 6C. | Describe the plan to protect the confidentiality of records (e.g., locked office, locked file cabinet, password-protected computer or files, encrypted data files, database limited to coded data, master list stored in separate location).  Confidentiality will be protected through password-protected access to all data. |
| 6D. | Describe how data will be disposed of and when disposal will occur.  Data will be stored for an indefinite amount of time, for purposes of other researchers to replicate and reproduce the results from the proposed project. However, when data are deemed unnecessary, data will promptly be permanently deleted. |

1. Funding

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| 7A. | Is this study externally funded?  *For example, this research is funded by a source outside Missouri State; a federal agency, non-profit organization, etc.*  No |
| 7B. | Is this study internally funded?  *For example, this research is funded by a source inside Missouri State; departmental funds, the Graduate College, etc.*  This research will be partially funded through departmental funds awarded via publication incentive awards. |

1. HIPAA

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| 8A. | Does your study contain protected health information (PHI)?  *PHI is any information in a medical record or designated record set that can be used to identify an individual and that was created, used, or disclosed in the course of providing a health care service, such as a diagnosis or treatment.*  No |

1. Supporting Documentation (to upload)

*Human Subjects Training Certificates, HIPAA Training certificates if applicable, informed consent documents, assent documents, recruitment tools, surveys/Questionnaires/Other Social-Behavioral measurement tools, departmental documents, other documents*

Additional Information

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| 10A. | Would you like to add additional information? |