

CASE Challenge Solution Submission Template

[The following template should be used to define and organize your solution. Please review and adhere to the following points prior to submission:

- Areas marked in grey should be removed, and replaced with your text, prior to submitting.
- Submissions may not exceed 10 pages in length.
- Headings and italicized prompts should remain in the document, in the order prescribed, for submission.
- The ‘Solver Names’ field and associated content will be removed prior to evaluation and each submission will be given a unique ID. Please keep all other sections anonymous.]

Solver Names

[Place the lead Solver’s full name first. This individual will serve as the main point of contact for the submission.]

Solution Identifier/Name

[Provide a submission name (i.e. team name) to help CASE Challenge evaluators differentiate your solution from other solutions.]

I. Solution Overview

In the below lettered subsections, provide support for your solution concept, design, and the procedures to be employed within. Describe why your solution will work and how it will measure the accuracy of credibility techniques and technologies.

a. Solution Summary

Provide a short summary of your proposed solution.

[Provide a high-level summary of your CASE Challenge solution. This section should be no longer than one page in length. More detailed information should be provided in subsequent sections.]

b. Solution Validity [*Scientific Support 2. Validity*]

[Describe how you are defining, operationalizing, measuring, and assessing credibility within your solution. Identify the particular aspect of credibility that your solution addresses, e.g. reliability, trustworthiness, honesty.]

c. Solution Background [*Scientific Support 1. Background*]

[Discuss the theoretical and/or empirical (verifiable by observation and experience) support for your approach. Briefly describe where your idea came from and the basis of your solution.]

II. Solution Design and Methodology

In this section, describe the detailed steps for implementing your solution. Figures and illustrations may be used to complement the textual description. Consider including information about the following: physical setting, roles and responsibilities of researchers and participants, participant

incentives, detailed researcher/participant interactions, objective ground truth utilized, data generated and positive/negative consequences of being assessed as credible or not.

III. Solution Self-Assessment

Reflect in the below sections on your solution, with respect to its relevance to key CASE Challenge evaluation criteria. Identify and describe the broader implications of your solution via the following prompts.

a. Scientific Support

In the below numbered subsections, discuss why your solution is replicable and generalizable. Describe how it will objectively measure the accuracy of credibility assessment techniques and technologies.

1. *Replicability [Scientific Support 3. Replicability]*

[Describe the ease with which your solution could be given to other researchers and implemented in the same way.]

2. *Generalization [Scientific Support 4. Generalization]*

[Describe the ease with which your solution's methods, and ideally the results, could be applied to new populations, settings, and used to evaluate a range of credibility assessment techniques or technologies, etc.]

3. *Ground Truth [Scientific Support 5. Ground Truth]*

[Describe how the true state of credibility is objectively determined in your solution. Discuss how credibility is determined by an objective ground truth, and not by feelings, opinions or assumptions.]

b. Realism

In the below numbered subsections, discuss how your solution reflects the real-world situations, circumstances and conditions to which it will ultimately apply. Describe the ease with which your solution could be transitioned to real-world applications.

1. *Psychological Realism [Realism 1. Psychological Realism]*

[Describe how the motivators, consequences, and incentives implemented in your solution are reflective of the real world and personally meaningful to participants.]

2. *Physical Realism [Realism 2. Physical Realism]*

[Describe how the physical conditions within which your solution takes place are consistent with how credibility would be assessed in the real world. Examples include physical or virtual location, different mediums for communicating, as well as the makeup of the social or cultural environment.]

3. *Practicality [Realism 3. Practicality]*

[Describe the feasibility of implementing your solution. Potential considerations include the costs associated with specialized equipment and/or facilities, the time and work required to execute the solution and the availability of additional resources necessary to implement solution procedures.]

c. Novelty

In the below numbered subsections, discuss how your solution is unique and describe what is creative/clever about your ideas. Indicate how your solution is sufficiently different from the pre-existing class of standard mock crime solutions. It is only necessary to provide information for the subsections you feel are relevant to your solution.

1. *Procedure [Novelty 1. Procedure]*

[Describe any innovative methods used in your solution to expose participants to event(s), experience(s), and/or content/message(s) that are at the core of why someone or something is or is not credible.]

2. *Motivation [Novelty 2. Motivation]*

[Describe how your solution enables the choice of events, experiences and content/messages so that behaviors are chosen by the participant, rather than directed by the researcher.]

3. *Enhanced Realism [Novelty 3. Enhanced Realism]*

[Describe any clever methods used in your solution to enhance psychological realism, while maintaining physical realism.]

4. *Technology [Novelty 4. Technology]*

[Discuss any creative uses of innovative technologies (e.g. social media, augmented reality, etc.) in your solution.]

5. *Objective Measurement [Novelty 5. Objective Measurement]*

[Discuss any novel, creative, or clever methods used in your solution to establish objective ground truth (e.g. unobtrusive data collection, biological samples, etc.).]

d. Participant Considerations

In the below numbered subsections, discuss how your solution ensures the safety of the human participants and adheres to ethical principles and guidelines. Provide enough detail to illustrate that the experiment is safe and ethical for human subjects.

1. *Beneficence [Participant Considerations 1. Beneficence]*

[Discuss how your solution maintains the safety of participants, as well as avoids causing immediate or long-term harm (physical or psychological). Provide information on how your solution maximizes benefits to the participant, while minimizing harm.]

2. *Respect for Persons [Participant Considerations 2. Respect for Persons]*

[Discuss how your solution ensures the autonomy (power to make one's own choices) and rights of a participant are not compromised.]

3. *Justice [Participant Considerations 3. Justice]*

[Discuss how your solution ensures the fair selection and treatment of participants.]

4. *Investment [Participant Considerations 4. Investment]*

[Discuss how much personal impact your solution has on participants. For example, describe how much time and resources participation would require.]

IV. Supplementary Information

[Optional] In this section, provide any supplementary information related to your solution that was not covered in the previous sections.

V. References

[Optional] In this section, provide citations of any references you utilized in generating your solution.