**Trusted Artificial Intelligence Challenge for Armaments Systems Engineering  
Fall Stage - Scoring Sheet**

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Team:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objectives:** This research addresses the challenge of designing and operating systems that contain AI and autonomy with uncertain performance to provide overall systems behaviors that responsible and trustworthy. Rather than focusing on changes to the AI model to increase trust, eight student teams will focus on developing and improving systems engineering methods to provide this increased level of trust. This effort focuses on:

* Assured design of AI and autonomy into systems, and
* Risk-based monitoring and management for the operational use of AI-based capabilities.

The focus of the Fall Stage is to introduce a simulation environment for the teams to experiment with their proposed changes to the design and operation of the system, and prepare for mission simulation in the Spring which will involve more sensing and the potential for mission failure.

**Team Assessment:**

Rank your agreement with the following sentences:

1. This team’s deliverables described the **systems engineering activities and artifacts** best suited to build trust in AI-enabled systems.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Strongly Disagree | Disagree | Mildly Disagree | Neutral | Mildly Agree | Agree | Strongly Agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Score:\_\_\_\_\_\_\_\_\_

Notes:

1. This team’s deliverables described the **infrastructure** needed to validate trust of AI-enabled systems.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Strongly Disagree | Disagree | Mildly Disagree | Neutral | Mildly Agree | Agree | Strongly Agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Score:\_\_\_\_\_\_\_\_\_

Notes:

1. This team’s deliverables described **key workforce skills and abilities** required for an integrated product team to successfully develop and manage AI-enabled systems.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Strongly Disagree | Disagree | Mildly Disagree | Neutral | Mildly Agree | Agree | Strongly Agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Score:\_\_\_\_\_\_\_\_\_

Notes:

1. This team’s deliverables provide useful **design patterns** involving AI and autonomy for assured system performance.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Strongly Disagree | Disagree | Mildly Disagree | Neutral | Mildly Agree | Agree | Strongly Agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Score:\_\_\_\_\_\_\_\_\_

Notes:

1. This team’s deliverables provide useful methods for **risk-based monitoring and management** of   
   AI-based capabilities.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Strongly Disagree | Disagree | Mildly Disagree | Neutral | Mildly Agree | Agree | Strongly Agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Score:\_\_\_\_\_\_\_\_\_

Notes:

1. This team’s deliverables provide **quantitative methods** for assured AI-enabled system performance.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Strongly Disagree | Disagree | Mildly Disagree | Neutral | Mildly Agree | Agree | Strongly Agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Score:\_\_\_\_\_\_\_\_\_

Notes:

1. This team’s deliverables identify **best practices** for assured AI-enabled system performance.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Strongly Disagree | Disagree | Mildly Disagree | Neutral | Mildly Agree | Agree | Strongly Agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Score:\_\_\_\_\_\_\_\_\_

Notes:

1. This team’s deliverables identify **novel approaches** for assured AI-enabled system performance.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Strongly Disagree | Disagree | Mildly Disagree | Neutral | Mildly Agree | Agree | Strongly Agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Score:\_\_\_\_\_\_\_\_\_

Notes:

1. This team’s **plans** for future stages are feasible and address interesting aspects of the AI challenge for armaments systems engineering.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Strongly Disagree | Disagree | Mildly Disagree | Neutral | Mildly Agree | Agree | Strongly Agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Score:\_\_\_\_\_\_\_\_\_

Notes:

1. This team’s systems engineering methods are clearly described and can be **readily adopted** by others who want to develop and operate assured AI-enabled systems.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Strongly Disagree | Disagree | Mildly Disagree | Neutral | Mildly Agree | Agree | Strongly Agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Score:\_\_\_\_\_\_\_\_\_

Notes:

Total Score:\_\_\_\_\_\_\_\_\_

Summary Notes: