Please review the below requirements and deliverables for the Paper or Project options.

# 1 Paper

The **Paper** involves performing research and analysis in one of the *Topic Areas* included in the **Survey**.

## 1.1 Requirements

- Formulation of a specific research question or comparative analysis concerning technologies in the selected Topic Area

- Literature review of academic papers, industry reports, and relevant documentation of software ecosystem

- Proposed methodology for addressing research question or performing comparative analysis

- Experimental results and analysis with both qualitative and quantitative components

- Future directions and possible related areas of exploration

## 1.2 Deliverables

- Report & Documentation

    - Abstract - Research summary, objectives, and next steps.
    - Overview - Experiment outline, relevant literature, proposed analysis.
    - Experiment - Systems setup, benchmarking, simulations.
    - Results - Measurements/Metrics tables, visualizations, evaluation.
    - Conclusion - Success/Failure results, outputs, caveats/cautions.
    - Bibliography - Reference citations (Chicago style - AMS/AIP or ACM/IEEE).

- Code & Data

    - Reference Documentation - Software commands, inputs, installation.
    - Benchmark Framework - Baselines, parameters, controls.
    - Data Sources - Links, downloads, access information.
    - Source Code - Listings, documentation, dependencies (open-source).

# 2   Project

The **Project** involves development and operations in one of the *Topic Areas* included in the **Survey**.

## 2.1   Requirements

- Formulation of a specific development initiative or integration goal concerning technologies in the selected Topic Area

- Literature review of academic papers, industry reports, and relevant documentation of software ecosystem

- Proposed changes for development features/bugfixes or integration testing

- Testing results and review with both qualitative and quantitative components

- Future directions and possible related areas of construction

## 2.2   Deliverables

- Report & Documentation

    - Abstract - Development summary, objectives, and next steps.
    - Overview - Solution outline, relevant literature, proposed system.
    - Design - System capabilities, interactions, integration.
    - Architecture - Software components, interfaces, implementation.
    - Conclusion - Success/Failure results, outputs, caveats/cautions.
    - Bibliography - Reference citations (Chicago style - AMS/AIP or ACM/IEEE).

- Code & Data

    - Reference Documentation - Software commands, inputs, installation.
    - Testing Framework - Cases, harness, coverage.
    - Data Sources - Links, downloads, access information.
    - Source Code - Listings, documentation, dependencies (open-source).