**CONCEPT PAPER**

**NAME:**

**PROGRAM:**

**Working Title:**Enhancing Object Recognition Models through Computer Vision: Synthetic Image Generation for Plastic, Paper, and Garbage Bag Classification

**Rationale and Significance:**

● State the research problem and significance of the project to the current **needs** of the industry/field/country,  in the future.

○ The proposal should clearly identify and discuss the specific needs/problems to be addressed  ○ The proponent should have a clear understanding of the needs/problems

○ Is it just a perceived need or observed need or based on consultations?

○ Do needs link to business opportunities?

○ Target market or beneficiaries (size, growth, players, segments)?

● The research must also include compelling **solutions**.

○ What is the proposed solution?

○ Will your proposed solution be relevant in the future, or five years from now?

○ Would it satisfy important needs?

○ How would it satisfy the needs?

○ Could it solve the entire problem, or would it address a critical part?

○ What are the limitations?

○ Present the solution in a form that could be visualized graphics, mock-ups, frameworks

  ● Technologies from the research proposal must make **differentiation** from the current/available  technologies.

○ Compare with competitive or substitute solutions/technology, what is the differentiation of what is  being proposed?

○ What are its advantages?

○ Its Unique features?

○ Can this differentiation create greater value than that of existing?

○ Can it reduce cost? Increase efficiency, provide better performance?

○ Can it result to special skills or exceptional services?

○ Can it provide new information?

○ Can it be a technology or an invention comprising of new design, approaches; use of new materials  ○ Can they be protected or protectable by patents, copyrights, trademarks?

● **Benefits** from the research proposal must also be taken into consideration.

○ What are the benefits that can perceive/receive after using the solution?

○ Quantify the benefits if possible.

○ What would be its impact to the target market/beneficiaries?

**Major Activities**

● Enumerate the components/major activities of the project and its brief description.

**Expected Output**

● Indicate the specific products, processes, or services which the project is expected to produce and how  these can be used; quantify when possible

*Note: Write-ups must be supported with appropriate literature and proper citations. Limit to 2 pages only.*