**SURVEY** QUESTIONNAIRE

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| --- | --- | --- |
| Research Title | Enhanced PSO and ACO for Cloud Load Balancing: A Comparative Study | |
| Lead Researcher | Laranga, John Danmel C. | |
| Members | Reyes, Kier Christian F. |  |
| Violanta, Jan Alfred G. |  |

Please rate the questions based on the following criteria. Use the following rating scale: 5 = Strongly Agree, 4 = Agree, 3 = Undecided, 2 = Disagree, 1 = Strongly Disagree.

**Section 1: General Information**

Name:

**Section 2: Assessment of the Proposed System by IT Experts**

**A. Response Time**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Review Questions** | **5** | **4** | **3** | **2** | **1** |
| 1 | The system generates measurable response time data when comparing EPSO and EACO algorithms. |  |  |  |  |  |
| 2 | The response time differences between EPSO and EACO support algorithm evaluation decisions. |  |  |  |  |  |
| 3 | The response time measurements remain stable across multiple simulation runs. |  |  |  |  |  |

**A. Resource Utilization**

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| **No.** | **Review Questions** | **5** | **4** | **3** | **2** | **1** |
| 1 | The system generates measurable resource utilization data when comparing EPSO and EACO algorithms. |  |  |  |  |  |
| 2 | The resource utilization differences between EPSO and EACO support algorithm evaluation decisions. |  |  |  |  |  |
| 3 | The resource utilization measurements remain stable across multiple simulation runs. |  |  |  |  |  |

**A. Energy Efficiency**

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| **No.** | **Review Questions** | **5** | **4** | **3** | **2** | **1** |
| 1 | The system generates measurable energy efficiency data when comparing EPSO and EACO algorithms. |  |  |  |  |  |
| 2 | The energy efficiency differences between EPSO and EACO support algorithm evaluation decisions. |  |  |  |  |  |
| 3 | The energy efficiency measurements remain stable across multiple simulation runs. |  |  |  |  |  |

**A. Degree of Imbalance**

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| --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Review Questions** | **5** | **4** | **3** | **2** | **1** |
| 1 | The system generates measurable imbalance data when comparing EPSO and EACO algorithms. |  |  |  |  |  |
| 2 | The imbalance differences between EPSO and EACO support algorithm evaluation decisions. |  |  |  |  |  |
| 3 | The imbalance measurements remain stable across multiple simulation runs. |  |  |  |  |  |

**A. Makespan**

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| **No.** | **Review Questions** | **5** | **4** | **3** | **2** | **1** |
| 1 | The system generates measurable makespan data when comparing EPSO and EACO algorithms. |  |  |  |  |  |
| 2 | The makespan differences between EPSO and EACO support algorithm evaluation decisions. |  |  |  |  |  |
| 3 | The makespan measurements remain stable across multiple simulation runs. |  |  |  |  |  |

**A. Functional Suitability**

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| **No.** | **Review Questions** | **5** | **4** | **3** | **2** | **1** |
| 1 | The system supports advanced requirements for simulating EPSO and EACO algorithms. |  |  |  |  |  |
| 2 | The simulation produces results that are appropriate for comparing EPSO and EACO under different workloads. |  |  |  |  |  |
| 3 | The system accommodates different workload scenarios for testing EPSO and EACO effectively. |  |  |  |  |  |

**B. Interaction Capability**

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| **No.** | **Review Questions** | **5** | **4** | **3** | **2** | **1** |
| 1 | Experts can easily configure customized test cases for EPSO and EACO simulations. |  |  |  |  |  |
| 2 | The simulation workflow is logically efficient for expert-level use. |  |  |  |  |  |
| 3 | The system interface enables efficient modification of simulation parameters. |  |  |  |  |  |

**C. Accuracy of Results**

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| **No.** | **Review Questions** | **5** | **4** | **3** | **2** | **1** |
| 1 | The results generated by the simulation are valid for assessing EPSO and EACO in cloud load balancing. |  |  |  |  |  |
| 2 | The results generated by the system are consistent across repeated simulation runs. |  |  |  |  |  |
| 3 | The system produces reliable outputs that align with expected performance metrics (response time, resource utilization, energy efficiency, makespan, degree of imbalance). |  |  |  |  |  |

**D. Scalability**

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| **No.** | **Review Questions** | **5** | **4** | **3** | **2** | **1** |
| 1 | The system can handle increasing workloads during EPSO and EACO simulations. |  |  |  |  |  |
| 2 | The system maintains performance when the number of cloudlets and virtual machines is scaled up. |  |  |  |  |  |
| 3 | The simulation results remain consistent even as workload complexity increases. |  |  |  |  |  |

***Thank you for participating in our survey. We appreciate your time and effort in providing valuable response/feedback to our research.***