**SAIDOI Framework Blueprint for AI Systems**

**1. Core Principles:**

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| ***1.1. Universality:*** *Applicable across diverse AI systems and domains, regardless of underlying technology or specific application.*  ***1.2. User-Centricity:*** *Prioritizing end-user understanding, ease of interaction, and accessibility.*  ***1.3. Modularity:*** *Allowing for flexible adaptation to specific AI applications and user needs.*  ***1.4. Transparency:*** *Providing clear insights into AI functionalities, decision-making processes, and limitations.*  ***1.5. Scalability:*** *Accommodating future advancements in AI technology and expanding application domains.* |

**2. Universal Components:**

**2.1. AI System Description (ASD):**

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| ***2.1.1. Purpose and Functionality:*** *A concise description of the AI system's intended purpose, key functionalities, and target users.* |
| ***2.1.2. Input/Output Specifications:*** *Clearly defined data formats, input requirements, and expected output types.* |
| ***2.1.3. Underlying Technology:*** *A brief overview of the AI techniques and algorithms employed by the system.* |
| ***2.1.4. Performance Metrics:*** *Key performance indicators (KPIs) and evaluation metrics used to assess the system's effectiveness.* |
| ***2.1.5. Limitations and Constraints:*** *Transparent disclosure of the system's limitations, potential biases, and known constraints.* |

**2.2. User Interface and Interaction (UII):**

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| ***2.2.1. Interface Design Principles:*** *Guidelines for designing user interfaces that are intuitive, accessible, and aligned with user expectations.* |
| ***2.2.2. Interaction Modalities:*** *Support for various interaction methods, including text-based, voice-based, and graphical interfaces.* |
| ***2.2.3. Feedback Mechanisms:*** *Clear and informative feedback to users on system actions, progress, and outcomes.* |
| ***2.2.4. Personalization Options:*** *Allowing users to customize their interaction experience based on their preferences and needs.* |
| ***2.2.5. Accessibility Features:*** *Ensuring accessibility for users with disabilities through features like screen readers and alternative input methods.* |

**2.3. Data Management and Security (DMS):**

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| ***2.3.1. Data Acquisition and Preprocessing:*** *Guidelines for collecting, preparing, and processing data used by the AI system.* |
| ***2.3.2. Data Storage and Security:*** *Secure storage and management of user data, adhering to relevant privacy regulations.* |
| ***2.3.3. Data Provenance and Traceability:*** *Maintaining a clear record of data origin, transformations, and usage within the AI system.* |
| ***2.3.4. Data Governance and Compliance:*** *Adherence to data governance policies and relevant legal and ethical frameworks.* |

**2.4. Performance Monitoring and Evaluation (PME):**

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| ***2.4.1. Performance Metrics and Reporting:*** *Continuous monitoring and reporting of key performance indicators related to accuracy, efficiency, and user satisfaction.* |
| ***2.4.2. User Feedback Mechanisms:*** *Collection and analysis of user feedback to identify areas for improvement and enhance system usability.* |
| ***2.4.3. Auditing and Logging:*** *Maintaining detailed logs of system activities, including user interactions, data processing, and performance metrics.* |
| ***2.4.4. Error Handling and Recovery:*** *Mechanisms for identifying and handling errors, providing informative error messages, and facilitating system recovery.* |

**2.5. Ethical Considerations and Societal Impact (ECSI):**

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| ***2.5.1. Bias Mitigation:*** *Strategies for identifying and mitigating potential biases in the AI system's algorithms and data.* |
| ***2.5.2. Fairness and Inclusivity:*** *Ensuring equitable access and outcomes for all users, regardless of their background or characteristics.* |
| ***2.5.3. Privacy and Data Protection:*** *Implementing robust privacy safeguards to protect user data and comply with relevant regulations.* |
| ***2.5.4. Transparency and Explainability:*** *Providing clear explanations of AI system decisions and actions to promote user trust and understanding.* |
| ***2.5.5. Accountability and Responsibility:*** *Establishing clear lines of accountability for the development, deployment, and use of the AI system.* |

**2.6. DOI (Digital Object Identifier) (e.g., Figshare, Zenodo, OSF, Dryad, Mendeley...):** *https://doi.org/xxxxxx/xxxxxxxxxxxxxxxxxx*

**3. Blueprint Implementation:**

The SAIDOI framework can be implemented as a set of guidelines, templates, and tools that facilitate the development, deployment, and utilization of AI systems. This could include:

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| ***3.1. SAIDOI Documentation Template:*** *A standardized template for documenting AI systems based on the framework's components.* |
| ***3.2. SAIDOI User Interface Toolkit:*** *A set of design patterns and best practices for creating user-friendly interfaces for AI systems.* |
| ***3.3. SAIDOI Evaluation Metrics Library:*** *A collection of standardized metrics for evaluating AI system performance and user satisfaction.* |
| ***3.4. SAIDOI Training and Certification Program:*** *A program to educate developers and end-users on the principles and application of SAIDOI.* |

**4. Apache 2.0 License:**

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