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**PAJAIS Submission Style Guide**

**Author Author1, Author Author2,\***

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***Abstract***

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| *All PAJAIS manuscripts should be submitted in the style of a structured abstract with no more than 300 words. Write an informative abstract that addresses key points. The abstract should not include references. The structured abstract has four labeled sections3.*  **Background:**  **Method:**  **Results:**  **Conclusions:**  **Keywords:** Keyword1, Keyword2, Keyword3, Keyword4, Keyword5. |

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3 Jiang, J., & Tsai, J. C. A. (2019). Constructing an Effective Abstract: Guidelines and New Standards in PAJAIS. *Pacific Asia Journal of the Association for Information Systems*, *11*(3), 1-4.**Heading 1**

**Introduction**

The rapid development of software technologies, the proliferation of digital devices and networking infrastructure of today, have by and large, augmented user’s capability to generate data (Rada, Ataeib, Khakbizc, & Akbarzadehd, 2017). In the age of information, users are unceasing generators of structured, semi-structured, and unstructured data that if collected and crunched correctly, may reveal game-changing patterns (Ataei & Litchfield, 2020).

The unprecedented proliferation of data have emerged a new ecosystem of technologies; one of these technologies is big data (Mannering, Bhat, Shankar, & Abdel-Aty, 2020; Rad & Ataei, 2017). Big data is a term emerged to describe large amount of data that comes in various forms from different channels. Within the years, big data has attained a lot of attention from academia and industry, and many strive to benefit from this new material (Erevelles, Fukawa, & Swayne, 2016). Howbeit, adopting big data requires the absorption of great deal of complexity and many traditional systems cannot cope with characteristics of this domain.

Based on various reports and surveys published within the last decade, approximately 75% of big data projects have failed (AI, 2019; Gartner, 2014; Manyika et al., 2011; Nash, 2015; Partners, 2019; White, 2019). Among the challenges of adopting big data, the most frequently mentioned are 1) Architectural and system development challenges 2) Rapid technology change challenges and 3) Organizational challenges (Bashari Rad, Akbarzadeh, Ataei, & Khakbiz, 2016; Chen, Kazman, Garbajosa, & Gonzalez, 2017; Singh, Lai, Vejvar, & Cheng, 2019).

Today, majority of big data systems are designed underlying ad-hoc and complicated architectural solutions that do not favour many principles of software engineering (Gorton & Klein, 2015; Hummel, Eichelberger, Giloj, Werle, & Schmid, 2018; Nadal et al., 2017). As the systems grow bigger and new technologies are introduced, software architectures will have harder time to design the suitable solution for any given context. This is a foundation for an immature architecture that is hard to scale and maintain.

Since the approach of ad-hoc design to big data systems is undesirable and leaves many engineers in the dark, there is a need for more software engineering research for big data systems. To this end, this study presents a systematic literature review on big data (BD) reference architectures (RAs). Conceptualisation of the system as a reference architecture, helps with understanding of the system’s key components, behaviour, composition and evolution, which in turn affect quality attributes such as maintainability, scalability and performance (Hilliard). Therefore RAs can be a good standardisation artefact and a communication medium that not only results in a concrete architecture for big data systems, but also provide stakeholders with unified elements and symbols to discuss and progress big data projects (Galster and Avgeriou, 2011) (Angelov et al., 2009).

One example of such is OAuth; the most commonly used protocol for authentication over the web, and it comes from a well-structured reference architecture (OATH, 2007).

Concepts,

principles and procedures of architecting are increasingly applied to help manage the complexity faced by

stakeholders of systems.

(Cloutier et al., 2010)

As BD system development is a practice of technology orchestration, RAs can address some of the problems that emerge (Cloutier et al. 2010). RAs are abstract artefacts that allow for high-level contextualization of the system and its comprising components. Practitioners that build complex systems, software engineers, and system designers use RAs so that a collective understanding of system components, functionalities, data-flows and patterns that shape the overall qualities of system are made clear. Furthermore, the RA provides a foundation to adjust a system design to better meet business objectives (Cloutier et al. 2010; Kohler and Specht 2019). An RA provides predefined architectural patterns that address classes of problem or issue which enables an overall context of the system to be defined, its major component is identified, and its quality attributes assessed. On that account, there is a need for more research in the area of BD RAs, and SLR can be a good academic effort to provide means by which current best evidence from literature can be combined, interpreted and explained. SLRs can play a momentous role in disseminating knowledge, developing new theories, supporting evidence-based practice and overall future research studied in the field (Paré et al. 2016).

**Document Layout**

***Page Layout***

* A4 size
* 1” (2.54cm) from top and bottom margins
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\* All items such as paragraph, table, and figure should fit in this width. Otherwise, use horizontal orientation

***Page Alignment***

* Title and authorship: Centered
* Main text: justified

***Type Font, Spacing, and Indent***

* **Title:** Arial 16, Bold
* **Abstract:** heading: Arial 14, Bold, Italic; text: Arial 11, Italic
* **Keywords:** text: Arial 11, three to five keywords
* **Heading 1** (e.g., introduction): Arial 14, Bold (\* Headings do not have roman numbers)
* **Heading 2:** Arial 12, Bold, Italic (\* Headings do not have roman numbers)
* **Heading 3:** Arial 11, Bold (\* Headings do not have roman numbers)
* Line spacing: single
* All other text: Arial 11
* No indent: additional one-line spacing separates paragraphs

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| **Heading 1**  ***Heading 2***  **Heading 3** |

***Page Number***

* Do not insert the page number.

***Document Format***

Submitted file should be in Microsoft Word format.

**Manuscript Material Ordering**

1. Title
2. Abstract
3. Keywords
4. Main Body

Typically beginning with introduction and ending with conclusions; Section numbering not allowed. Suggested reading: Getting Published in PAJAIS: A Practical Guide from the Perspectives of Editors (Jiang & Tsai, 2019).

1. Acknowledgments\*
2. References
3. Appendices
4. About the Authors\*

\*The author information, acknowledgment, and other information about manuscript should be filled out in the title page of online manuscript systems during review process. PAJAIS logo, header, footer is not allowed to use when the manuscript is under review.

***Elements Style***

1. Footnotes

Footnotes should be avoided if possible. If they are absolutely necessary, footnotes are referred to by superscript number, and displayed on the same page as referred in text; font is Arial 10, single-spaced.

1. In-Text Reference

In-text reference should be referred to in text within parentheses, as follows.

* + - Single author - Fichman (2004)… ; …(Fichman, 2004).
    - Two authors - Lyytinen and King (2004)… ; …(Lyytinen & King, 2004).
    - More than two authors, including first citation - Rossi et al. (2004)… ; (Rossi et al., 2004).

1. Figures

Figures should be inserted at the end of the paragraph in which they are first referred. If there is not sufficient space for full display, it can appear on the next page.

* Figure should be boxed.
* Figure should be aligned center (both vertically and horizontally).
* The font of entries is Arial 10 point
* Figure titles should be at the bottom of the figure box.
* Figure titles should be horizontally left aligned, vertically center aligned; white font, Arial 11 point, bold on a black box; the height of the black box for figure title is 0.7cm” for single line title, and 1.2cm” for double line title.
* Notes should be added at bottom of figure box in Arial 9 point.

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| **Figure 1 - Example of Figure Appearance** |

1. Tables

Tables should be inserted at the end of the paragraph in which they are first referred. If there is not sufficient space for full display, it can appear on the next page.

* Table should be boxed.
* Table should be aligned center (both vertically and horizontally), but the entry alignments are at authors’ disposal.
* The font of entries is Arial 10 point
* Table titles should be at the head of tables.
* Table titles should be horizontally left aligned, vertically center aligned; white font, Arial 11 point, bold on a black box. The height of the black box for table title is 0.7cm for single line title, and 1.2cm for double line title.
* Notes should be added (1) at bottom of table in Arial 9 point or (2) in the last raw of table without indent.

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| **Table 1 - Example of Table Appearance** | | | |
|  |  | Mean | St.dev |
| TEL | 1985 | -- | -- |
| 1991 | 15.9 | 14.0 |
| 2001 | 17.7 | 11.5 |
| CALL | 1985 | -- | -- |
| 1991 | 0.1 | 0.06 |
| 2001 | 0.1 | 0.09 |
| URBAN | 1985 | 64.8 | 20.3 |
| 1991 | 67.1 | 19.6 |
| 2001 | 69.9 | 18.7 |
| TEL = Average monthly telephone subscription cost;  CALL = Average cost of local call;  URBAN = Size of urban population, as a percentage of total population; | | | |

Notes: Year dummies are included in all regressions. Standard errors are in parentheses. \*p<0.1. \*\*p<0.05.\*\*\*p<0.01

**References**

All references should follow the American Psychological Association (2010) guide. The only major difference between APA and PAJAIS style does not use Digital Object Identifiers (DOIs).

* **Journal Papers:**

Hevner, A., March, S., Park, J., & Ram, S. (2004). Design science in information systems research. *MIS Quarterly*, *28*(1), 75-105.

* **Magazine Articles:**

Ackerman (2007). The perfect blend. *Consumer Goods Technology Magazine*. Retrieved from http://consumergoods.edgl.com/media/publicationsarticle/art-mar07-6.pdf

* **Books:**

Alvesson, M., & Deetz, S. (2000). *Doing critical management research*. Sage Publications: Thousand Oaks, California.

* **Book Chapters:**

Keren, G. (1990). Cognitive aids and debiasing methods: Can cognitive pills cure cognitive ills? In J. Caverni, J. Fabre, & M. Gonzalez (Eds.), *Cognitive biases* (pp. 523-555). Amsterdam, North Holland: Elsevier.

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