

**Cover letter for the paper titled: Terramycelium: A Reference Architecture for
Adaptive Big Data Systems**

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Dear editor,

I wish to submit an original research article entitled “Terramycelium: A Reference Architecture for Adaptive Big Data Systems” for consideration by Journal of Systems and Software. I confirm that this work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere.

In this paper, I explore the idea of a domain-driven distributed reference architecture for big data systems. This is significant because this is a novel approach to data architecture.

I believe that this manuscript is appropriate for publication by Journal of Systems and Software because it is within the journal’s aim and scope, and the topics of interests, specifically ‘artificial intelligence, data analytics and big data applied in software engineering’.

According to various surveys, approximately 75% of big data projects have failed within the industry. Among the challenges, data architecture and system development are bold. To this end, our research aims to facilitate this area by introducing a reference architecture. We have followed the guidelines of ‘empirically grounded reference architecture’ for the development of the artefact and evaluated our prototype in practice using ‘architecture tradeoff analysis method’. The results show good degree of relevance, and various thought-provoking architectural tradeoffs.

I have no conflicts of interest to disclose.

Please address all correspondence concerning this manuscript to me at pouya.ataei@aut.ac.nz.

Thank you for your consideration of this manuscript.

Sincerely,

Pouya Ataei