Review of: "A Proposed Secure Wearable Device Payment System Based on Blockchain Technology"

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Potential competing interests: No potential competing interests to declare.

This paper describes work on a Blockchain-based secure payment system for wearable devices. The proposed solution implements a decentralized transaction process using the blockchain properties of immutability, decentralization, and overall security and trust to guarantee safe and traceable transactions in an IoT environment. In my opinion, the novelty factor is average. The quality of the writing can still be improved and would benefit from proofreading by a native speaker.

Some apparent problems with blockchain-based IoT implementations include scalability issues. This type of problem may be even more relevant in payment systems. How will the increasing number of wearables, bringing a higher volume of transactions, affect the throughput and latency of the system?

Although the validation of the system is listed as part of future work, including a validation section in the paper would be a significant strength. Even small-scale tests could help demonstrate the viability of the proposed system and elevate the overall quality of the paper. The test scenarios could be the testing of security measures to common attacks such as DDoS and Sybil or even testing throughput and overall transaction processing speed.

Regarding the Introduction:
A concise description of the paper's structure should be included at the end of the section.

Regarding the description of Related Works and References:
The discussion of related works would benefit from the inclusion of a comparative table.

General comments concerning the quality and consistency of the paper:

- Capitalization of section titles is not consistent throughout the manuscript.
- There are undefined acronyms in the manuscript (e.g., SSL, TLS). The acronyms ECC and Fin-Tech were not defined in their first occurrence. The acronym RFID was defined multiple times in the discussion.
- The usage of an apostrophe to indicate possession should be avoided in technical documents. E.g., rewrite expressions such as "(...) IoT technology's (...)", "(...) today's (...)".
- All included resources should be cross-referenced and discussed in the manuscript. E.g., Figure 1 and Figure 2 are never mentioned in the text.

Specific comments authors may consider when preparing future versions of this paper:

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1. I suggest the improvement of some of the text.
2. Avoid using 'etc.' in technical or academic writing. It suggests a lack of specificity.
3. I suggest rephrasing the following paragraph: "Therefore, by recording in what way devices interact, blockchain can help solve most security holes and traceability...".
4. The Figures look good. Change “WiFi” in Figure 2 to “Wi-Fi”.
5. The captions of the Figures should have consistent capitalization.

The above comments should be considered as suggestions and were written in a positive criticism tone.