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| Book Name: | [**Science and Technology: Developments and Applications**](https://www.bookpi.org/bookstore/product/science-and-technology-developments-and-applications-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_4990** |
| Title of the Manuscript: | **DEVELOPMENT OF WEARABLE DATA ACQUISITION DEVICE FOR BLOOD PRESSURE VARIABILITY MONITORING** |
| Type of the Article | **Book Chapter** |

**Special note:**

**A research paper already published in a journal can be published as a Book Chapter in an expanded form with proper copyright approval.**

**Source Article:**

**This chapter is an extended version of the article published by the same author(s) in the following journal.**

**International Journal of Advances in Electronics and Computer Science, 10(7): 2394-2835, 2023.**

**Available:** [**https://ijaecs.iraj.in/paper\_detail.php?paper\_id=20028**](https://ijaecs.iraj.in/paper_detail.php?paper_id=20028)

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| PART 1: Comments | | |
|  | Reviewer’s comment **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | Author’s Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | This manuscript explores the development of a wearable device for monitoring blood pressure variability, which is a timely and relevant topic given the growing demand for non-invasive, real-time health monitoring solutions. The study presents an interesting approach by leveraging **Pulse Arrival Time (PAT) and Pulse Transit Time (PTT)** as cost-effective alternatives to expensive Finapres-based methods. What makes this work stand out is its **practical hardware implementation**, integrating readily available components like **Arduino Uno, MAX30102, AD8232, and TCA9548A.** This makes the system not only affordable but also accessible for both **clinical applications and research use.** |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | The title is relevant to the manuscript. This title emphasizes the affordability and core technology used in the study. |  |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | The abstract is well-structured but contains **minor grammatical inconsistencies.** Additionally, while the abstract introduces the key concepts, it would be beneficial to **explicitly state the main findings**—for instance, the level of correlation observed between BP variability and PAT/PTT. |  |
| **Is the manuscript scientifically, correct? Please write here.** | The manuscript presents a solid approach to blood pressure variability monitoring and is technically well-founded. There are a few areas where more clarity and discussion would make it even stronger. 1.The paper mentions that PAT tends to be noisier than HRV due to measurement errors, but it would be helpful to **quantify this noise  2.** The manuscript references a **window variance algorithm** for peak detection, but it would be useful to include more details on how this algorithm performs. 3.While the study highlights the importance of blood pressure variability, it doesn’t fully explain **how this device could be applied in real-world healthcare settings.** |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.**  **-** | The references are **generally sufficient and recent,** but **some key citations** could be added like:  1. Additional references discussing **wearable blood pressure monitoring** in real-world settings could support the claims.  2. Benchmarking results against existing commercial devices |  |
| Is the language/English quality of the article suitable for scholarly communications? | The manuscript is **understandable** but **requires some grammatical improvements around run-on sentences,** tense inconsistencies and more descriptive figures and captions |  |
| Optional/General comments | The manuscript does a great job explaining the hardware implementation, but the software algorithms used for BP variability analysis could be discussed in more detail. Right now, it's not entirely clear how the data is processed and analyzed, so adding some explanation around that would improve the clarity.  Additionally, the comparison with Finapres could be expanded a bit. A simple table summarizing key differences in cost, accuracy, and usability would make it easier for readers to see the benefits and trade-offs of the proposed device.  Finally, if possible, including a small real-world validation study with patients would significantly strengthen the manuscript. Even preliminary results from a small test group could help demonstrate the device’s effectiveness in practical settings.  The manuscript is scientifically valid and well-structured but requires grammatical improvements, minor clarifications, and additional references to strengthen its claims. |  |

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| **PART 2:** | | |
|  | Reviewer’s comment | Author’s comment *(if agreed with the reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Are there ethical issues in this manuscript?** | *(If yes, Kindly please write down the ethical issues here in detail)* |  |

**Reviewers:**

**Abhinav Balasubramanian, United States of America**