# Article information:

[2112.15423] Modelling matrix time series via a tensor CP-decomposition  
<https://arxiv.org/abs/2112.15423>

# Article summary:

1. The article proposes a new one-pass estimation procedure for modelling matrix time series based on a tensor CP-decomposition.

2. A refined approach is proposed to improve the finite-sample performance of the estimation.

3. Asymptotic theory has been established under a general setting without stationarity, showing that all component coefficient vectors in the CP-decomposition are estimated consistently with certain convergence rates.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is written in an objective and unbiased manner, presenting both sides of the argument equally and providing evidence for its claims. The authors have provided detailed explanations of their proposed method and have also provided simulations and real data to illustrate its effectiveness. Furthermore, they have established asymptotic theory under a general setting without stationarity, which shows that all component coefficient vectors in the CP-decomposition are estimated consistently with certain convergence rates.

The only potential issue with the article is that it does not explore any counterarguments or alternative methods for modelling matrix time series, which could be beneficial for readers who are looking for more comprehensive information on this topic.

# Topics for further research:

* Matrix time series modelling
* Alternative methods for matrix time series
* Non-stationary matrix time series
* Asymptotic theory for CP-decomposition
* Estimation of component coefficient vectors
* Convergence rates for matrix time series

# Report location:

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