

# Review of: "Enhancing Food Type Recognition: A Comprehensive Study on Sequential Convolutional Neural Networks for Image Classification Accuracy"

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Potential competing interests: No potential competing interests to declare.

The paper tackles the issue of food recognition. English language must be improved. It is recommended to use more formal language and to add references. The justified format is preferable.

## More in detail:

**Abstract:** Needs to be re-written. In detail:

- It may be better to delete the sentence "Addressing the challenge of food recognition," and start directly with "This study investigates the effectiveness ..."
- Consider rephrasing the sentence: "Insights from the model's architecture, performance, and findings are discussed ..."

**Introduction:** It is preferable to use more formal language.

- Considering rephrasing the sentence: "Navigating the complexities of food identification presents a significant hurdle, ...", "Amidst the vast landscape of deep learning techniques, ..."
- It is necessary to add recent references to support your statements, e.g., "Their versatility is evident in their successful application across diverse domains, including medical imaging [REF], autonomous vehicle detection [REF], and facial recognition [REF] ..."
- Please add references: Which is the Food-101 database used by [7]? Which is the database challenged in this paper? Which is the database challenged by [8]? (Note: "challenged" is an unusual term here; consider revising for clarity.)
- Consider more recent references, e.g., "sophisticated deep learning techniques [2, 3, 4 of the year 2014, 2015, 201]. I am sure there are more sophisticated methods proposed in recent papers (after 2020)."
- Better to re-write the presentation of Liu et al.: Which database did they use? What is the reached performance? Same comment for refs. [10-15]. Which is the used database? You can compare the performance of several methods only if working on the same database and using the same (train, test, validation) division.
- All referenced papers are old, years 2017-2018. Please, consider more recent papers.
- Table 38 is probably Table 1. Please add references to all datasets too.

## Proposed Methods:

- Fig. 1 does not “depict” the database.
- If I am correct, the challenge database has 8 food categories for a total of 1098 images. Are you introducing the database, or is it available online? Please add references.
- Do you make data augmentation before or after (train, test, val) division? It must be done after.
- What are the previous performances on the same database?

**Reference** to interesting and recent papers introducing databases of food; to be checked and, maybe, added:

- (Important paper introducing the UEC Food-100, one of the most common databases in this field) Matsuda, Y., Hoashi, H., Yanai, K.: Recognition of multiple-food images by detecting candidate regions. In: 2012 IEEE International Conference on Multimedia and Expo, pp. 25–30 (2012)
- Important paper introducing the segmented version of the UEC-Food database: B. Arslan, S. Memiş, E.B. Sönmez and O.Z. Batur, “Fine-Grained Food Classification Methods on the UEC Food-100 Database”, IEEE Transactions on Artificial Intelligence (TAI), DOI: 10.1109/TAI.2021.3108126 (2021).
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