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## Quick Seed Quality Check Using Artificial Intelligence

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Abstract: Globally, wheat is the leading source of carbohydrates and fiber in human food. On an average, the wheat contains 12 percent water, 70 percent of carbohydrates, 12 percent protein, 2 percent fat, 1.8 percent minerals, and 2.2 percent crude fibers. As per the research the importance of identifying the quality of wheat cannot be overstated. Manually specifying or establishing the quality of wheat necessitates skilled judgement, which takes time. When wheat varieties appear to be so identical, manually distinguishing them becomes an extremely time-consuming operation. To overcome this problem, Image processing can be used to classify wheat according to its quality. The seed quality identification is very important in agriculture. Before boring the seed in farm, it must be viewed properly and then sowed. In the current scenario the farmersare taking more efforts in their farm and spending more time and money for better productivity. But despite their hard work, they do not get proper profit. So, the technology can come for rescue here make it more efficient. There are certain limitations to human eye to observe the seed. So, the electronic world helps us to separate the faulty and damaged seeds from quality seeds. The image processing algorithm is implemented using Python. The proposed technique is defined with the assistance of image processing mechanism with the help of Python software.

Keywords: Convolutional Neural Network, Image Processing, etc.

## REFERENCES

- [1] Gulzar, Y., Hamid, Y., Soomro, A. B., Alwan, A. A., & Journaux, L. (2020). A convolution neural networkbased seed classification system. Symmetry, 12(12), 2018.
- [2] Krestenitis, M., Orfanidis, G., Ioannidis, K., Avgerinakis, K., Vrochidis, S., & Kompatsiaris, I. (2019). Deep neural networks are used to identify oil spills from satellite photos. Remote Sensing, 11(15), 1762.
- [3] Mrda, J., Crnobarac, J., Dušanić, N., Jocić, S., & Miklič, V. (2011). Germination energy as a parameter of seed quality in different sunflower genotypes. Genetika-Belgrade, 43(3), 427-436.
- [4] Bishaw, Z., Struik, P. C., & Van Gastel, A. J. G. (2012). Farmers' seed sources and seed quality: 1. physical and physiological quality. Journal of Crop Improvement, 26(5), 655-692.
- [5] Campbell, M. T., Hu, H., Yeats, T. H., Brzozowski, L. J., Caffe-Treml, M., Gutiérrez, L., ... & Jannink, J. L. (2021). Using trait-specific association matrices, we improved genomic prediction for seed quality variables in oat (Avena sativa L.). Frontiers in genetics, 12, 437.
- [6] Rahman, H., & Kebede, B. (2021). Using a population with B. oleracea genome content, mapping seed quality characteristics in the C genome of Brassica napus and their influence on other features. The Plant Genome, 14(2), e20078.
- [7] Essah, S. Y. C., & Bishnoi, U. R. (2004). Seed quality response of soybean to weed control timing using glyphosate. Canadian journal of plant science, 84(4), 1213-1219.
- [8] Krestenitis, M., Orfanidis, G., Ioannidis, K., Avgerinakis, K., Vrochidis, S., & Kompatsiaris, I. (2019). Deep neural networks are used to identify oil spills from satellite photos. Remote Sensing, 11(15), 1762.
- [9] Xu, L., Javad Shafiee, M., Wong, A., Li, F., Wang, L., & Clausi, D. (2015). A thresholding-guided stochastic fully-connected conditional random field model was used to predict oil spill candidates from SAR data.



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