Implementation of Agricultural Assistant Chatbot using Artificial Neural Network

Bangar Akshada[1], Bare Arati[2], Lokhande Shruti[3], Nikam Shital[4], Prof. Kale Ashish.S[5]
Department of Information Technology[1,2,3,4,5]
SND College of Engineering & Research Centre, Yeola, India

Abstract: *This study presents the development of a chat room and a chatbot designed to facilitate discussions on prevalent farming issues among peers and experts. Its primary aim is to provide timely support to farmers in making informed decisions about their farming practices. To create a structured framework for these conversations, a standardized set of questions was formulated through consultations and surveys involving farmers, experts, and other stakeholders. The questions were analyzed to extract 'intents,' representing the specific information or assistance users might seek, and 'examples,' which are concrete instances users provide to express their particular intent. Additionally, 'entities' were identified to represent distinct objects or concepts related to these intents.The model was trained using the Artificial Intelligence Markup Language (AIML) to predict the intent based on the provided examples. This training process enhances the chatbot's ability to understand and respond to user queries effectively.Furthermore, the chatbot was deployed on a cloud platform, reducing the computational resources required on the client end. This approach ensures accessibility and usability for a broader user base without significant hardware constraints).*

Keywords: Chat-Bot, Agriculture, Chat-room, Artificial Intelligence, Farming Industry, intents, examples

REFERENCES

[1] Abbasi, R., Martinez, P., Ahmad, R., 2022. The digitization of agricultural industry–a systematic literature review on agriculture 4.0. Smart Agricultural Technology , 100042.

[2] Adke, S., Li, C., Rasheed, K.M., Maier, F.W., 2022. Supervised and weakly supervised deep learning for segmentation and counting of cotton bolls using proximal imagery. Sensors 22.

[3] Agarwal, O., Ge, H., Shakeri, S., Al-Rfou, R., 2021. Knowledge graph based synthetic corpus generation for knowledge-enhanced language model pre-training, in: Proceedings of the 2021 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies, pp. 3554–3565.

[4] Ahlers, D., 2013. Assessment of the accuracy of geonames gazetteer data, in: Proceedings of the 7th workshop on geographic information retrieval, pp. 74–81.

[5] Akiva, P., Dana, K., Oudemans, P., Mars, M., 2020. Finding berries: Segmentation and counting of cranberries using point supervision and shape priors. arXiv preprint arXiv:2004.08501 .

[6] Alam, A., 2021. Should robots replace teachers? mobilisation of ai and learning analytics in education, in: International Conference on Advances in Computing, Communication, and Control (ICAC3), pp. 1–12.

[7] Alreshidi, E., 2019. Smart sustainable agriculture (ssa) solution underpinned by internet of things (iot) and artificial intelligence (ai). arXiv preprint arXiv:1906.03106 .

[8] Andrychowicz, M., Denil, M., Gomez, S., Hoffman, M.W., Pfau,D., Schaul, T., Shillingford, B., De Freitas, N., 2016. Learning to learn by gradient descent by gradient descent.Advances in neural information processing systems 29.

[9] Arumugam, K., Swathi, Y., Sanchez, D.T., Mustafa, M., Phoemchalard, C., Phasinam, K., Okoronkwo, E., 2022. Towards applicability of machine learning techniques in agriculture and energy sector. Materials Today: Proceedings 51, 2260–2263.

[10] Auer, S., Bizer, C., Kobilarov, G., Lehmann, J., Cyganiak, R., Ives, Z., 2007. Dbpedia: A nucleus for a web of open data, in: The semantic web, pp. 722–735.

[11] Auer, S., Lehmann, J., Hellmann, S., 2009. Linkedgeodata: Adding a spatial dimension to the web of data, in: 8th International Semantic Web Conference on The Semantic Web-ISWC, pp. 731–746.

[12] Ayouni, S., Hajjej, F., Maddeh, M., Al-Otaibi, S., 2021. A new mlbased approach to enhance student engagement in online environment.Plos one 16, e0258788

Copyright to IJARSCT

www.ijarsct.co.in

DOI: 10.48175/568

ISSN
2581-9429
IJARSCT

667