

Virtual Assistant for Customer Service using Transformers

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Abstract. Industry 4.0 represents a production concept based on automation, real-time optimization and digitalization of production factories. Its main driver is Artificial Intelligence (AI) and Machine Learning (ML); capable of handling large dataset and identifying human patterns in everyday life. In this context, Generative Pre-Trained Transformer (GPT), Assistants have great impact and importance in Industry 4.0 for Natural Language Processing (NLP), code generation, pattern identification. The end-user may require assistance for operating procedures, equipment operations and resolving common errors, for example Frequently Asked Questions (FAQs) to rectify errors or to start the process and this can be done through providing them with assistance and real-time queries resolving. Real time monitoring, GPTs can manage organizations' data or information for data collection, monitoring and output efficiency. The main objective is we have focused on designing a GPT that will assist queries related to IAFSM by scrapping and learning all organizations' data/information using sources like organizations' website. However, GPTs can use data like previous chat logs, service log etc. which will provide assistance to users, based on more training data. GPT will assist the user queries; providing them with documentation, video links. These queries/ resource can be linked with data i.e., conditions, outputs, inputs value and storing them for future references and predictions related to defects and maintenance by providing alerts, messages through messenger Applications (Apps) or web. This method will enhance user experience, provide 24X7 support.

Keywords: Deep Learning, Natural Language Processing, Industry 4.0, Artificial Intelligence, Chatbot, Chat GPT