Generative AI such as chatbots used for customer service in the Automotive Industry (WaterTunnel Car Wash) have shown very impressive capabilities, it has also some key limitations. Here we will discuss about the capabilities, key limitations and potential future development of chatbots which has been used for customer service in automotive industry.

Current capabilities:

1. Natural language understanding: “Gen AI chatbots can understand and respond to natural languages that fixed into its programming, also can interact wide ranges of customer inquiries in the natural languages, in the same way as human” Adamopoulou and Moussiades (2020, p. 100006). Such understanding makes customer easy to interact and solve the problem of standing into long line for services and reduced the waiting time.
2. 24/7 availability: chatbots can provide all time customer service support, addressing simple to moderate inquiries without human support. This feature is very supportive to the business in Automotive service. For instance: if someone has left their vehicle to the service and wants some update about what time it is going to be ready, they can inform anytime with the help of chatbots.
3. Multilingual capabilities: chatbots can communicate in multiple languages and can cover wide ranges of customer into the automotive business. Such kind of chatbots can cover broader range of customers such as native and non-native speakers from different regions and help to support the business internationally.
4. Integrate backed systems: “Chatbots can access and provide information from company’s internal data bases and systems and can offer real-time updates on services, scheduling appointments and vehicle information” Wang et al. (2022, p. 102535). For example: how long does it take to be ready customer’s vehicles and how long they need to be wait for next service.
5. Service appointment scheduling: customer support chatbots can assist in scheduling appointment service online, check the availability day, and receive reminder. Apart from that it can provide real-time update of vehicles repairs and maintenance.

Limitations:

1. Emotional intelligence: current chatbots are lack of true emotional intelligence, which may lead to same emotional responses in different situations. Current chatbots are lack of emotional supports to the customer services.
2. Handling complex situations: Gen AI chatbots can interact limited queries that fixed into its system. Furthermore, chatbots can generate responses based on training data into its system, they may struggle with creative problem-solving situations. They may provide same answers in different queries in that situations human communication may needed.
3. Potential misinformation: “Chatbots as a customer service need to be updated regularly otherwise, they may provide inaccurate or outdated information” Hasal et al. (2021, p. e6426). Such misinformation could have been providing incorrect information about features, update and specifications that may lead misunderstanding to customers.
4. Privacy and security concerns: while using customer service chatbots, customer need to provide their personal data and information that stored into the chatbots system. That may lead to privacy and security issues because of cyber threats.
5. Maintenance and updates: chatbots may require regular update and training to improve their performance better. They may not handle unexpected enquiries from customers because they have fixed limited program into their system. So, they may not provide details explanations and advice that human expert can offer.

Potential future developments:

1. Enhanced contextual understanding: future chatbots are likely to understand the situations of the customers and react according to the customers demand and can provide more accurate, natural and relevant responses.
2. Emotional intelligence: the future chatbots are expected to recognize the emotions of the customers and react accordingly. For example: if the customers are angry, chatbots should be able to calm down them in the same way how human customers service provider do. Overall, future chatbots should be able to understand human expressions.
3. Integration with IoT: when chatbots is connected to the IoT devices within the vehicles then it would be easy to understand the actual conditions of vehicles, what is the actual problems, maintenance alerts etc.
4. Voice recognitions: it is expected to develop a chatbots who can understand the customers voice message to interact with. It will be preferable to with through a voice message rather than texting if the chatbots are able to two-way communications.
5. Sales assistance: it is expected that the chatbots can assist in sales process of Automotive industry such as helping customers selecting and purchasing vehicles, providing financial suggestions and even providing virtual test drives.

While successfully navigating the short-term skepticism and long-term promises of using GenAI chatbots in the automotive customer service sectors, the company should follow the following criteria to mitigating risks and building trust with their customers:

1. Implement enough training and monitoring systems to make sure the accuracy and appropriate responses to the customers.
2. Company should prioritize data privacy and security in chatbot system while designing and implementing chatbots.
3. There should be clear guidelines for the limitations of what chatbots can do and there should always be human to assist customers for more complex issues.
4. Regularly gather the customers feedback and update working system of chatbots accordingly.

Considering above mentioned current capabilities, limitations and future developments here we have designed the SWOT analysis of customer service chatbot used in automotive industry.

A diagram of swot analysis

Description automatically generated

Fig: SWOT analysis of customer service chatbots used on Automotive Industry.

Reference:

Adamopoulou, E. and Moussiades, L., 2020. Chatbots: History, technology, and applications. *Machine Learning with applications*, *2*, p.100006.

Hasal, M., Nowaková, J., Ahmed Saghair, K., Abdulla, H., Snášel, V. and Ogiela, L., 2021. Chatbots: Security, privacy, data protection, and social aspects. *Concurrency and Computation: Practice and Experience*, *33*(19), p.e6426.

Wang, X., Lin, X. and Shao, B., 2022. How does artificial intelligence create business agility? Evidence from chatbots. *International journal of information management*, *66*, p.102535.