

Tools and Techniques

Python was chosen because of its accuracy, versatility, and ease of use as the ideal language for developing the AI hotel assistant chatbot.

- It is perfect for a dynamic, customer-focused platform because of its straightforward language, which allows developers and non-technical team members to collaborate smoothly.
- Python's low code requirements allow for quick testing and development, which allows for quick adjustments in a hectic hospitality environment.
- Through the use of libraries like NLTK, Gtts (Google text-to-speech), PyAudio, TensorFlow, and surprise (for SVD), Python allows the chatbot can perform a variety of functions, from real-time booking to sending visitors personalised responses.
- Its cross-platform compatibility guarantees simple deployment across a range of devices, and its smooth connection with online frameworks and APIs makes interacting with hotel systems easier.
- Python's detailed documentation and active community make it simple to maintain, enabling easy troubleshooting, scalability, and flexibility as projects grow.

Generally speaking, Python is the best choice for developing a strong, efficient, and future-ready AI system for the hospitality industry due to its flexibility and capacity to expand in size.