performance on a variety of professional and academic standards, even if it might not be as proficient as humans in everyday situations [13]. For example, compared to GPT-3.5, it has attained a score in the highest 10% of participants in tests on a virtual legal examination [12]. There remains an opportunity for enhancements to GPT-4's factuality, steerability, and remaining within the provided restrictions, but after six months of incremental alignment using lessons from OpenAI's adversarial evaluation programme and ChatGPT, the model achieved its best-ever efficiency [57].

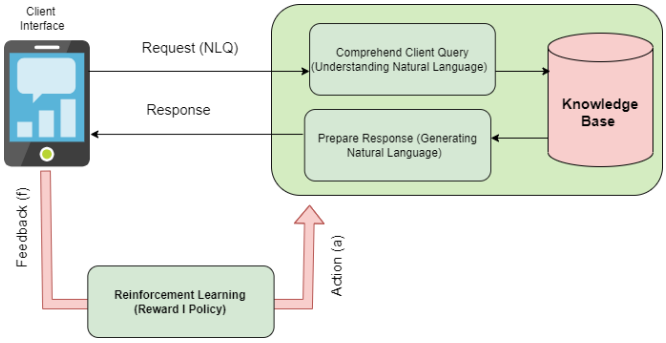


Figure 2: General Architecture of ChatGPT

Text generation, question answering, language translation, and emotion evaluation are merely some of the many NLP tasks in which GPT models have proven themselves to be cutting-edge performers. Chatbots, aiding customers, and material production are just some of the practical applications identified in the literature [1] [2] [5].

## 3. Functions of ChatGPT: Beyond Perspective

Because of its sophisticated and flexible design, ChatGPT can be used for a wide variety of NLP tasks. Some of the ways in which it is able to revolutionise how humans interact with machines are as follows [2, 4, 5, 6, 10, 11, 13, 58]: context-specific awareness; linguistic generating skills; task flexibility; multinational competence; scalability; non existent-shot and several-shot training; and enhancing capability. The most notable functions of ChatGPT are explained below:

*3.1 Cognitive Comprehension:* ChatGPT's capability to grasp conversational contexts is one of its greatest strengths. ChatGPT's authentic and intriguing conversations with customers are a result of its ability to understand the significance of statements and words.

*3.2 Talent to Generate Languages:* ChatGPT's language-generating skills are top-notch; the generated content is logical, appropriate, and free of mistakes in grammar. It may be utilised for tasks like writing materials, summarising, and revising because of its proficiency with creating text.

*3.3 Power to Change Tasks:* ChatGPT's flexibility throughout sectors and disciplines makes it a useful tool for a broad variety of applications. It may be fine-tuned to serve a variety of purposes, including but not limited to client service, document generation, coaching, interpreting, and beyond. Because of its flexibility, ChatGPT may be used by programmers to build specialised applications.

*3.4 Competence in Multiple Languages:* ChatGPT's linguistic flexibility makes it suitable for international deployment and widens its potential user pool. Its ability to translate text, analyse user emotions, and produce material in several languages are all made possible by this feature.

*3.5 The Ability to Grow:* ChatGPT can be scalable in terms of both processing resources and turnaround times because of its modular design. Because of its capacity for growth, it may be used for tasks of varied sizes, from personal endeavours to enterprise-wide programmes.

*3.6 Short-Chance and No-Chance Training:* In order to grasp unfamiliar duties with no lengthy training, ChatGPT is capable of nil-shot and quick learning. The framework may acquire novel tasks with just a few scenarios in few-shot acquiring knowledge, while in zero-shot teaching it can create replies for tasks it hadn't encountered previously. This capability shortens the creation cycle by reducing the requirement for big labelled datasets and considerable refinement.

*3.7 Tweaking*: ChatGPT's tweaking capabilities are essential, enabling programmers to tailor the model to a variety of applications. ChatGPT's replies are more precise and pertinent since the model was trained using a smaller data set that was specifically designed for the intended use case. The ability to fine-tune ChatGPT allows programmers to build extremely specialised recommendations.

*3.8 Rapid Development of ChatGPT:* Optimising the consumer's engagement and facilitating productive interaction when working with AI models like ChatGPT depends heavily on quick implementation. Consumers may direct the AI model to produce more precise, pertinent and helpful replies by quick programming.

## 4. Applications: Roadmap and Outlook

Due to its adaptability and superior NLP skills, ChatGPT has found use outside of the academic research community. In this section, we discuss how ChatGPT can be used in a variety of applications (as shown in Figure 3) illustrating the ways in which the platform can revolutionise business processes, bolster collaboration, and spark new ideas.

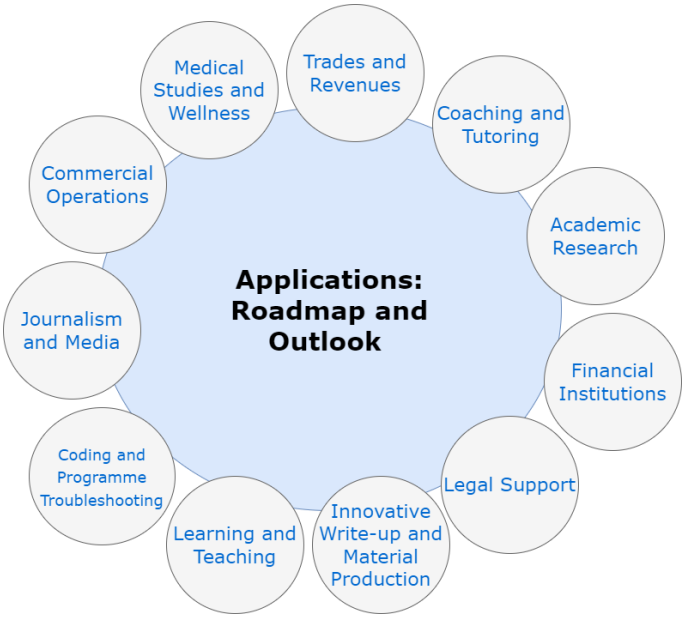


Figure 3: Applications of ChatGPT

### 4.1 Medical Studies and Wellness

ChatGPT's utility in medicine and healthcare [14] lies in its ability to (i) aid in diagnosis by analysing patient records, health status, and indications to produce treatment strategies tailored to each patient's unique desires and requirements, (ii) summarise and synthesise clinical studies to support a research-based practices, (iii) offer medical knowledge and guidance to patients in a simple and digestible manner, and (iv) encourage interaction among medical experts. Further, ChatGPT can be utilised to create robots that can aid with patient evaluation, which is the process by which medical professionals assess the severity of a patient's illness and decide what treatment is