## Article 1: Chatbots: History, Technology, and Applications.

https://www.sciencedirect.com/science/article/pii/S2666827020300062

**Key aspects to discuss:**

(1) The **problems it tries to address**,

(2) To what **extent** it does,

(3) Whether it **unlocked other usages/problems**.

(4) Indicate in which of the 4 scenarios of the **ADEME** (https://transitions2050.ademe.fr/en ) this technology is rooted.

**Overview:**

- Natural dialog systems, also referred to as chatbots.
- The two essential implementation technologies are pattern matching and machine learning.
- Explores the diverse applications of chatbots, including industrial use cases.
- The risks related with chatbot use are outlined, and ways to mitigate them are proposed.
- Considerations such as behavior, look, manufacturer credibility, privacy, and protection are critical for building confidence between users and chatbots.
- Weaknesses and potential risks linked with chatbots, including language comprehension, emotional responses, and security concerns. Strategies for mitigating these difficulties are also discussed.

**(1) The problems it tries to address**:

- **Education:** Chatbots assist with course enrollment, student engagement, and Foreign Language Learning (FLL) and **fill the gap by offering assistance** and increase demand of learning.
- **Customer service:** Provide 24-hour support and assist the clients by **improving availability and scalability** compared to traditional customer support.
- **Health:** Chatbots provide emotional support, medication reminders, and information during pandemics such as COVID-19, enhancing **accessibility to healthcare information and support**.
- **Robotics**: Natural language interfaces are used to teach, reduce anxiety, and aid in a variety of educational contexts**, interacting with robots more intuitively**.
- **Industry:** Chatbots are used in a variety of businesses to help with financial transactions, restaurant orders, order tracking, and information dissemination, **reducing the human workload/effort.**

**(2) To what extent it does:**

- Use **quality assurance tools** to continuously develop the chatbot by monitoring interactions, identifying areas for improvement, and providing important insights.
- Integrated **live chat services** for unidentified inputs, allowing human agents to take control for a smooth transition and reduced user irritation.
- Creating **acceptable and appropriate chatbot utterances**. This can include developing a database of permissible terms to reduce the likelihood of producing offensive information.
- Integrating the chatbot with **robust and secure systems** for crucial transactions.

It has not explored the topic thoroughly since **chatbots are always evolving**; resolving these flaws and risks **requires continual research**, technological breakthroughs, and a proactive approach to user experience and security.

**(3) Whether it unlocked other usages/problems:**

- **Handling personal information** in areas such as authentication and payment systems raises privacy and security risks.
- Chatbots frequently fail to fully **interpret user intent**, resulting in frustrating interactions. This flaw can be especially damaging in sales or service assistant contexts.
- **Toxic content**, such as recording personal information, exploiting it, or breaching confidentiality, endangers chatbot suppliers and users.
- **Digital voice assistants**, such as Amazon Alexa, may be vulnerable, including inadequate single-factor authentication.
- Long responses, grammatical problems, misused language, poor tone, a lack of personality, and an **unclear chatbot approach** can all lead to user frustration and discontent.

**(4) Indicate in which of the 4 scenarios of the ADEME this technology is rooted:**

May be rooted in the **"Green Technologies" scenario (Scenario 3)** to some extent.

- Corresponds with the **concept of technical growth** in Scenario 3.
- Chatbots are used to **optimize operations and increase productivity**, which is consistent with the use of digital technology for optimization in Scenario 3.
- While the chatbot article does not explicitly address energy consumption, the perspective of **technical breakthroughs** and the possible environmental implications of digital technologies may be relevant to Scenario 3's emphasis on energy efficiency.

Article concludes;

**“Current technology focuses on chatbots learning to talk but not to think!”**

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**Notes on ADEME:**

1. **Frugal Generation:** Prioritize low-tech, reuse, repair, collaborative digital activities, and consistent data centre consumption.
2. **Territorial cooperation:** Measured and responsible usage of goods, extensive sharing, and significant investments in efficiency and renewable energy solutions.
3. **Green Technologies:** The use of the best technologies, digital optimization, and consistent data centre utilization with greater energy efficiency.
4. **Repair Bet:** Believe in overall innovation, as well as the predominance of the Internet of Things and artificial intelligence. Increased energy and material use, which may have an environmental impact.

## Article 2: Talk with your dead loved ones - through a chatbot

https://www.cnet.com/culture/hereafter-ai-lets-you-talk-with-your-dead-loved-ones-through-a-chatbot/

- James Vlahos launched **HereAfter AI**, built as DadBot, a **conversational chatbot** that allows users to engage with a recorded voice avatar of their **deceased loved ones**.
- Creating **a comprehensive repository of one's life experiences**. It covers the problem of retaining memories and maintaining contact with the deceased.
- While the technology **does not seek to replace or mitigate grief**, it does provide an engaging and vivid way to **remember the deceased**, revealing the ability to organize memories and connect generations (generational knowledge transfer).
- The service goes beyond grief, offering a forum for **archiving and sharing personal stories**.
- Can be related with the **"Repair bet" scenario** described by ADEME. In this scenario, societal confidence in maintaining and repairing social and ecological systems is highlighted, which aligns with **Dadbot's mission to preserve human narratives and promote connections throughout generations**.
- The technology intends to **restore and preserve memories**, so promoting a more sustainable and meaningful manner of remembering and connecting with the past.