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The Use of Artificial Intelligence in Entrepreneurial Management – Creating the Ideal Customer Profile

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Abstract – This study aims to define the profile of the ideal customer by leveraging Artificial Intelligence (AI) through the ChatGPT application, based on a business plan summary for a "Gym with Wellness Area," which primarily offers table tennis table rentals. Employing a detailed research methodology, this paper identifies key traits of the market segment most likely to be attracted and retained by the business. The study explores interests and preferences, emotional states before and after service acquisition, fears and frustrations, desires and aspirations, and the self-perception of the ideal customer. The findings provide a comprehensive understanding of how to create and refine an ideal customer profile using AI, enabling the development of marketing strategies and services tailored to customer needs and preferences. The research results offer a strategic foundation for decision-making and promote sustainable and efficient business growth.

Keywords Artificial Intelligence, Entrepreneurial Management, Customer Profile

I. INTRODUCTION

In today's business landscape, understanding customer needs and behaviors is crucial for the success of any enterprise. Traditional methods of identifying and targeting potential customers often fall short due to the sheer volume and complexity of data involved. This inadequacy can result in suboptimal marketing strategies and missed opportunities for growth. Especially for new innovative businesses like for instance a table tennis gym with integrated wellness area can face real challenges of pinpointing their ideal customer profile to tailor their offerings effectively and stand out in a competitive market.

Effectively identifying and targeting the ideal customer profile is essential for several reasons. It allows businesses to optimize their market strategies, enhance customer satisfaction and improve retention rates. For a gym offering table tennis table rentals along

with wellness services understanding the ideal customer profile helps in designing services and promotional activities that resonate with the target audience's preferences and needs. This strategic alignment can lead to increased customer engagement, loyalty and ultimately growth of the business.

The limitations of traditional customer profiling methods highlight the need for advanced solutions. Artificial Intelligence (AI) offers a promising alternative by leveraging its capabilities in data analysis and pattern recognition. Specifically, AI applications like ChatGPT can process large datasets to uncover intricate customer insights that traditional methods might overlook. The motivation for adopting an AI-based approach in this study includes:

- **Efficiency:** AI can handle vast amounts of data, making the profiling process faster and more efficient.
- **Precision:** Advanced AI models can deliver highly accurate customer profiles by identifying subtle patterns and correlations in the data.
- **Innovation:** AI provides innovative tools and techniques that can significantly enhance the understanding and targeting of potential customers.

The primary objective of this study is to utilize Artificial Intelligence (AI), specifically the ChatGPT application, to create a comprehensive profile of the ideal customer for a gym offering table tennis tables rentals along with wellness services.

The literature review provides valuable insights into the application of Artificial Intelligence (AI) in customer profiling. It highlights the extensive use of machine learning techniques for customer segmentation, employing clustering algorithms such as K-means clustering, hierarchical clustering, and DBSCAN. These algorithms effectively segment customers based on diverse features, including purchasing behaviors, demographic aspects, and buying engagement patterns. In predictive modeling, supervised learning algorithms like decision trees, random forests, and gradient boosting machines are

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commonly used to forecast customer preferences and future behaviors. Natural Language Processing (NLP) plays a significant role in sentiment analysis, which involves examining customer feedback, reviews, and social media interactions to assess customer sentiment and satisfaction levels.

AI-driven chatbots and virtual assistants significantly enhance personalized customer service by gathering customer preferences and improving the overall customer experience. E-commerce platforms often implement recommender systems based on collaborative filtering to suggest products based on past user interactions and similarities with other users.

Additionally, content-based filtering recommends products or services by analyzing user profiles and item features. The prediction of Customer Lifetime Value (CLV) utilizes regression AI models to estimate the future value a customer will bring to a business over the entirety of their relationship. Furthermore, AI-driven behavioral analytics, such as pattern recognition algorithms, analyze customer behavior to identify high-value customers and those at risk of churn.

These advanced AI methodologies not only enable businesses to understand their customers better but also facilitate strategic decision-making processes to enhance customer satisfaction and loyalty.

The literature review provides insightful observations on the application of Artificial Intelligence (AI) in entrepreneurial management, with market analysis emerging as a pivotal area. For effective market analysis, AI-driven engines and specialized tools are employed to conduct trend analysis, enabling businesses to scrutinize market trends and consumer behaviors, thereby identifying novel and innovative business opportunities.

Another critical domain is competitor analysis, where AI-driven tools are extensively developed and utilized to monitor competitors' activities and market positioning. This information is crucial for informing strategic decisions within a business.

In the realm of product development, tools like CADENCE, which leverage AI and predictive analytics, are instrumental in developing and testing product prototypes, as well as forecasting market reactions. AI also plays a significant role in customer feedback analysis, allowing businesses to process and analyze large volumes of customer feedback, thereby guiding continuous product improvement processes.

Operational efficiency and process automation benefit greatly from AI, as it handles routine tasks, enhancing efficiency, and reducing operational costs. Additionally, personalized marketing is made possible through AI's ability to analyze customer data and create highly targeted and personalized marketing campaigns.

Finally, dynamic pricing is another area where AI proves invaluable. AI-driven pricing models enable businesses to adjust prices in real-time based on market demand and customer behaviors, optimizing revenue

and competitiveness. These applications of AI in entrepreneurial management not only facilitate more informed decision-making but also drive innovation and efficiency across various business operations.

II. METHODOLOGICAL APPROACH AND GUIDELINES

In this section, we will explore the utilization of ChatGPT version 3.5 for creating an ideal customer profile for a Business-to-Client (B2C) enterprise, using the business's summary as the initial source of information for artificial intelligence. The objective is to develop a comprehensive profile of an ideal customer by engaging with ChatGPT through a structured dialogue application.

Steps to create an Ideal Customer Profile:

1. Set up ChatGPT account:

Begin by creating an account at www.chatgpt.com. There are two versions available: a limited free version (3.5) and a more enhanced version (4.0). For demonstration purposes, we will use ChatGPT v3.5.

2. Understand the importance of input quality:

The quality of the AI's output is directly proportional to the quality of the input provided. Therefore, it is crucial to set the context accurately before querying the AI.

3. Prepare the AI context:

Start by ensuring that ChatGPT understands its role and the perspective from which it should read and respond to the business summary. This can be done with the following statement:

“ChatGPT, your role in the next upcoming scenario is to be a marketing expert for a company which primarily offers table tennis table rentals. Before continuing did you understand your expected role?”

4. Provide business plan summary:

Once the AI acknowledges its role, send the summary of the business plan as shown in Figure 2 below.

Follow up with a confirmation question to ensure the AI understands the summary and the type of clients the business might have:

“ChatGPT, did you understand the summary of the business plan and the type of clients the business might have?”

5. Define and Send Predefined Questions:

After receiving confirmation, send the predefined set of questions designed to extract detailed information about the ideal customer.

SUMMARY	
<p>Company Description</p> <ul style="list-style-type: none"> Newly established company. SC TTPRO SRL, CAEN code 7721 – activities of renting and leasing recreational goods and sports equipment. Mission: To inspire people to lead a more active, sports-based lifestyle, offering them the chance for a more relaxing and healthier life. Vision: We believe that everyone deserves to live a healthier, more relaxing life in harmony with each other. Products and services offered: <ul style="list-style-type: none"> Renting tables (4) for table tennis. Individual and group training. Wellness area. Therapeutic massage. <p>Market Analysis</p> <ul style="list-style-type: none"> New domain in Timișoara, growing with sponsorship opportunities and diversification of services offered. Significant trends in the coming years with the opening of new sports halls that could threaten the business. <p>Customer Analysis</p> <ul style="list-style-type: none"> Target market size: 500 adults in the southern area of Timișoara. Age range: 30-69 years. Net monthly income over 5000 LEI. <p>Competition Analysis</p> <ul style="list-style-type: none"> SC ROCKETSPIN SRL. The only modern table tennis hall in the western part of Romania. Covers the northern area of Timișoara. High quality rented products. Lack of additional services besides table tennis table rentals. <p>Team and Management</p> <ul style="list-style-type: none"> Company Administrator. Table Tennis Coach. Professional Qualified Masseuse. Receptionist/Saleswoman. 	<p>Marketing and Sales</p> <ul style="list-style-type: none"> Services will be sold through a newly arranged location in the southern area of Timișoara (Giroc), a rented and completely renovated 400m² space. Promotion of services online (website), socially (local tournaments), and in the business environment (contracts with multinational companies in the city). Access to services via a dedicated mobile application for each client. Customer loyalty through attractive weekly promotions, subscription discounts, and wellness area access discounts. <p>Financials</p> <ul style="list-style-type: none"> Initial Capital. Total Investment (renovation and equipment of the hall): 520,000 LEI / 104,000 EUR Monthly Operating Expenses: 41,850 LEI / 8,370 EUR Monthly Revenues (hall utilization rate): 153,000 LEI / 30,600 EUR Business Profitability (50% rentals/day): 93.431% Investment Recovery Term: 1.02 years <p>Funding Request</p> <ul style="list-style-type: none"> Borrowed Capital: 250,000 LEI / 50,000 EUR Own Capital: 270,000 LEI / 54,000 EUR Bank Loan / Investor (5 years): Transylvania Bank APR / Monthly Rate: 11.72% / 1000 EUR / Mo <p>Business Lifetime</p> <ul style="list-style-type: none"> Business Operation Duration: 30 years

Fig. 1. Summary of customized business plan.

The questions are as follows:

- Can you provide me with the demographic data, main interests, and preference of the business ideal customer?
- Can you give me the main information sources that the ideal customer may have access to before purchasing?
- How was the customer before buying the services and he did not like?
- How was the customer after buying the services and he started to love?
- What was the emotional state of the customer before purchase?
- What was the emotional state of the customer after the purchase?
- What was the customer's self-perception before the purchase?
- What was the customer's self-perception after the purchase?
- What were the customer fears and frustrations before buying the services?
- What desires and aspirations the customer could have after he bought the services?

6. Analyze AI Responses:

Gather and analyze the AI's responses to the following questions.

Question 1: Can you provide me with the demographic data, main interests, and preference of the business ideal customer?

AI-Answer 1:

Demographic Data:

- Age: 30-69 years.
- Location: Southern area of Timișoara.
- Income: Over 1000 EUR netto monthly.

Interests and Preferences:

- Recreational and sports activities: as individuals seeking a more active and healthier lifestyle, these clients are likely interested in sports activities such as table tennis and other wellness activities.
- Relaxation and well-being improvement: interest in wellness services and therapeutic massage indicates that these clients are looking for ways to relax and improve their mental and physical health.
- Socialization and participation in local events: participation in local tournaments or other sports events can be an attractive aspect for these clients, especially if they are involved in the local community.
- Personal skills improvement: clients may be interested in individual and group training to improve their table tennis skills or to stay fit.
- Comfort and accessibility: with an above-average income, these clients might also be interested in aspects such as comfort and accessibility, seeking quality services and convenient facilities.

Question 2: Can you give me the main information sources that the ideal customer may have access to before purchasing?

AI-Answer 2:

- Online research: the customer might have searched for information about locations in their area that offer table tennis table rental services. This could include visiting the websites of various sports facilities or reading reviews and ratings from other customers.

- Participation in local events: the customer might have participated in local table tennis tournaments or sports events where they had the opportunity to try the sport and learn more about it.
- Recommendations and references: the customer could have received recommendations from friends, family, or colleagues who have previously used table tennis table rental services and were satisfied with their experience.
- Interaction with staff: the customer might have interacted with the staff or managers of sports facilities to get additional information about the availability of table tennis tables and the services offered.

Question 3: How was the customer before buying the services and he did not like?

AI-Answer 3:

- Previous negative experiences: if customers have had negative experiences in the past with other similar businesses or services, they might be skeptical or hesitant before trying again.
- Lack of information or transparency: if information about the service, prices, or conditions was not clear or accessible before purchase, customers could have been disappointed by the lack of transparency.
- Quality of previous services: if they tried the service in the past and were dissatisfied with the quality or experience provided, they might be reluctant to try again.
- Negative feedback from other customers: if they have read or heard negative feedback from other customers about your service, this could be a barrier before purchasing.
- Perception of price: if customers felt that the price of the service did not reflect the value or quality offered, they might be discouraged from buying.
- Difficulties in communication or interaction with staff: if interacting with staff was difficult or unpleasant before purchasing, customers might be discouraged from continuing.

Question 4: How was the customer after buying the services and he started to love?

AI-Answer 4:

- Satisfying gaming experience: if the customer found the equipment and playing conditions to meet their expectations, they could have had a pleasant and enjoyable gaming experience.
- Adequate conditions and facilities: if the location offers a pleasant and comfortable environment for playing, as well as additional facilities such as locker rooms, showers, or relaxation areas, the customer might appreciate these aspects.

- Friendly services and staff: a team of professional, friendly, and well-trained staff can make a difference in the overall customer experience. If they received prompt and efficient service and interacted with kind and responsive personnel, this could have contributed to a positive experience.
- Value for money: if the customer felt that they received value for their money and that the services provided were in line with the price paid, they might have been satisfied with their experience and inclined to return or recommend the business to others.
- Additional benefits: if they benefited from promotions, discounts, or other special offers, as well as access to additional facilities such as a wellness area or therapeutic massage, the customer might have considered these aspects as adding value to their table tennis rental service.

Question 5: What was the emotional state of the customer before purchase?

Answer 5:

- Curiosity and interest: the customer might have felt curiosity and interest regarding the gaming experience and facilities offered by the business before making a reservation.
- Anticipation: looking forward to a new and fun experience, the customer could have felt pleasant anticipation about the possibility of playing table tennis and spending time in a specialized sports hall.
- Concern: in some cases, the customer might have been worried about aspects such as equipment availability, quality of facilities, or the overall gaming experience. This could have generated some anxiety or unease before deciding to rent a table tennis table.
- Enthusiasm: a customer enthusiastic and passionate about sports could have felt a high level of excitement and eagerness regarding the opportunity to play table tennis in a dedicated and professional environment.
- Indecision: for some customers, the decision-making process could have generated feelings of indecision or uncertainty regarding choosing the most suitable table tennis rental option or the facilities offered by the business.

Question 6: What was the emotional state of the customer after the purchase?

Answer 6:

- Satisfaction: if the gaming experience and facilities offered by the business met or even exceeded expectations, the customer might feel a strong sense of satisfaction. This could be generated by aspects such as the quality of equipment, the atmosphere in the sports hall, or the level of professionalism of the staff.
- Enthusiasm: if the customer had a pleasant and fun experience during the table tennis

game, they might be excited and delighted by the possibility of returning in the future to use the business's services again.

- Gratitude: if the customer received assistance or advice from the staff regarding equipment use or game proceedings, they might feel gratitude and appreciation for the services offered by the business.
- Relaxation: for some customers, the gaming experience could generate a state of relaxation and unwinding, providing them with a pleasant break from daily stress and an opportunity to spend their free time in an active and enjoyable way.
- Frustration or disappointment: if the gaming experience did not meet expectations or there were issues related to equipment or facilities, the customer might feel frustration or disappointment. This could be generated by aspects such as delays in reservations, faulty equipment, or lack of attention from the staff.

Question 7: What was the customer's self-perception before the purchase?

AI-Answer 7:

- Motivation and interest: the customer might have a variety of reasons for using the service, including the desire to spend their free time in an active and fun way, to socialize with friends or family, to practice and improve their sports skills, or to participate in competitions and events.
- Confidence level in abilities: for some customers, their level of confidence in their sports abilities and their capacity to perform in table tennis might influence how they perceive themselves before purchasing the service. Those with previous experience in this sport and confidence in their abilities might have a more positive self-perception compared to those who are less familiar or confident in this area.
- Expectations and anticipations: customers' self-perception might also be influenced by their expectations related to the gaming experience and what they hope to gain from using the service. Those who expect to have fun, relax, or improve their skills might have a more positive self-perception before purchasing, while those who feel unsure or anxious about the game might have a less optimistic perception.

Question 8: What was the customer's self-perception after the purchase?

AI-Answer 8:

- Achievement and satisfaction: the customer who feels satisfied with their experience with the service and who has been successful in the table tennis game might have an increased perception of their own abilities and achievements. Achieving personal goals or performing well during the game could

reinforce self-confidence and a sense of satisfaction.

- Competence and confidence: participating in table tennis and improving skills in this area could contribute to increasing the customer's level of confidence and feeling of competence. Success in a sport or physical activity can strengthen self-esteem and a sense of self-efficacy.
- Socialization and connection: for many customers, participating in social activities and interacting with other participants during the table tennis game could reinforce a sense of belonging and social connection. These positive interactions can influence customers' self-perception and their social relationships.
- Enjoyment and relaxation: a pleasant and relaxing experience during the table tennis game could contribute to improving the customer's well-being and overall self-perception. Engaging in recreational and fun activities can provide a break from daily stress and concerns, reinforcing a positive self-perception.

Question 9: What were the customer fears and frustrations before buying the services?

AI-Answer 9:

Fears:

- Poor performance during the game: some customers might fear they won't be able to handle or enjoy table tennis, especially if they lack prior experience in the sport.
- Feeling of incompetence: people unfamiliar with table tennis might fear appearing incompetent or making mistakes in front of more experienced players.
- Lack of pleasure or satisfaction: some customers may fear not having fun or enjoying the gaming experience while renting the table tennis table.

Frustrations:

- Negative experience during the game: customers could be frustrated by their performance during the game or by the difficulty in learning the techniques and strategies needed to play table tennis.
- Inadequate playing conditions: if the equipment or facilities provided for rental are not in good condition or suitable for table tennis, customers may be frustrated by the service quality.
- Negative interaction with other players: customers may be frustrated by the behavior or attitude of other players during the game, such as lack of fair play or excessive competitiveness.

Question 10: What could be the customer's desires and aspirations after they bought the services?

Answer 10:

- Improving table tennis skills: many customers aspire to become better at this sport and

enhance their playing abilities from one session to another.

- Experiencing fun and joy: the desire to have fun and relax during table tennis games can be a common aspiration for many customers.
- Having a positive experience: customers may aspire to have a pleasant and memorable experience while renting the table tennis table, including enjoyable interactions with other players and facility staff.
- Building community and social relationships: some customers may aspire to meet or spend time with others who share the same passion for table tennis, thereby contributing to community building or social relationships.
- Positive physical and mental outcomes: some customers may aspire to achieve positive physical and mental benefits from playing table tennis, such as improving physical fitness, reducing stress, and boosting self-esteem.

III. RESEARCH RESULTS

The study focused on leveraging Artificial Intelligence (AI) to develop effective marketing strategies and construct an ideal customer profile tailored to a personalized business plan for "Gym with Wellness Area". Key findings and recommendations include the following ideas:

- **Market segmentation**: The study utilized detailed demographic data and insights into ideal customer preferences to effectively segment the market. This approach significantly enhanced the precision of targeting strategies, resulting in the delivery of more relevant marketing messages and increased effectiveness of marketing campaigns.
- **Relevant interests and needs**: Analysis identified that ideal customers prioritize an active and healthy lifestyle, alongside a strong demand for relaxation and wellness services. This understanding guided the customization of services and the creation of targeted marketing content designed to resonate effectively with the intended audience.
- **Useful feedback**: Identifying aspects that were less favorable to ideal customers before purchasing services provided actionable insights. Addressing these concerns presents opportunities for process improvement and enhancing overall customer satisfaction. This proactive approach is crucial for refining service delivery and strengthening customer relationships.
- **Customer loyalty growth**: Addressing negative experiences and improving service quality based on customer feedback can significantly enhance customer loyalty. This proactive approach transforms dissatisfied customers into loyal advocates who not only continue to patronize the

business but also contribute positively to its growth and reputation. This cycle of feedback-driven improvement is essential for cultivating strong, long-term customer relationships.

- **Innovation opportunities**: Insights gathered have identified significant opportunities for business innovation, particularly in the expansion of wellness and relaxation service offerings. This strategic initiative aims to align with evolving customer preferences and to strengthen the business's competitive advantage in the marketplace. By leveraging these insights, businesses can position themselves as leaders in meeting the dynamic needs of their target audience while driving growth and differentiation.

Overall, the integration of AI in crafting the ideal customer profile and refining marketing strategies for "Gym with Wellness Area" demonstrates significant potential for enhancing customer engagement, satisfaction, and business performance.

IV. CONCLUSIONS AND FINAL REMARKS

If we look at the challenges of using AI solutions in entrepreneurial management, they may appear such as data privacy concerns, integration issues, and the need for specialized skills. Regarding future directions I can strongly outline the extremely high potential of further developments using AI-driven applications for ideal customer profiling and further usage within the complete spectrum of entrepreneurial management. As a final remark we could state that such a data collection method has provided a solid foundation for creating the ideal customer profile for the business - Gym with Wellness Area. Using this information to develop marketing strategies and improve customer experience can significantly contribute to the success of the studied business as well as any other business using this approach.

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