



9-16-2024

## Fitness Beverage Market Segmentation AI Project

Brady McCrae

University of North Dakota, brady.mccrae@und.edu

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### Recommended Citation

Brady McCrae. "Fitness Beverage Market Segmentation AI Project" (2024). *AI Assignment Library*. 71.  
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## Assignment: AI-Driven Market Segmentation for Fitness Beverages

As the marketing manager for a company launching a new line of fitness beverages, your goal is to segment the fitness beverage market using AI to reach the right audience with targeted marketing campaigns. This assignment will challenge you to critically evaluate AI tools and their outputs in the context of market segmentation.

### Instructions:

1. **Identify segmentation bases:** Research and identify relevant segmentation bases for the fitness beverage market. Consider demographic, psychographic, behavioral, and geographic factors.
2. **Analyze the segments:** Evaluate the characteristics, needs, and preferences of each identified segment.
3. **Research AI tools:** Investigate AI tools that offer market segmentation capabilities. Select either ChatGPT or Claude, considering factors such as accuracy, bias mitigation, and interpretability.
4. **Gather data:** Access publicly available data relevant to the product and target market. Create a fictional dataset based on realistic demographics and behaviors.
5. **Apply AI for segmentation:** Use the selected AI tool to analyze the data and automatically identify potential customer segments based on your chosen segmentation bases.
6. **Critically evaluate AI output:** Analyze the AI-generated segments for accuracy, relevance, and potential biases. Compare the AI-driven segmentation results with traditional segmentation methods.
7. **Develop targeted marketing campaigns:** Create marketing strategies for each AI-identified segment, considering their specific needs and behaviors. Explore different marketing channels for each segment.

### Critical Thinking Questions:

1. How does the AI-generated segmentation differ from traditional methods? What insights does the AI provide that might not be apparent through manual analysis?
2. What are the limitations of the AI tool you chose? How might these limitations impact the segmentation results?
3. How can you validate the accuracy and relevance of the AI-generated segments? What additional data or analysis might be needed?
4. What potential biases might be present in the AI's segmentation results? How can these biases be identified and mitigated?
5. How does the use of AI in market segmentation impact privacy concerns? What ethical considerations should be considered?

6. In what ways might over-reliance on AI-driven segmentation lead to missed opportunities or misunderstandings of the market?
7. How can human expertise and AI capabilities be best combined to create more effective market segmentation and targeted marketing strategies?

Deliverables:

Create a comprehensive report detailing:

1. The market segments identified, including justification for their selection.
2. The AI tool used, with an explanation of its selection criteria, capabilities, and limitations.
3. The segmentation results obtained using the AI tool, including:
  1. A critical analysis of the AI-generated segments
  2. Comparison with traditional segmentation methods
  3. Discussion of any unexpected or counterintuitive findings
4. Marketing strategies developed for each AI-identified segment, with justification based on the AI insights.
5. Challenges and limitations encountered when using AI for segmentation, including potential biases and how they were addressed.
6. Ethical considerations in using AI for market segmentation and targeted marketing.
7. Recommendations for integrating AI-driven insights with human expertise in marketing decision-making.

Rubric:

1. Identification and analysis of market segments (15 points)
  - Comprehensive identification of relevant segmentation bases
  - Thorough analysis of segment characteristics, needs, and preferences
2. AI tool selection and application (20 points)
  - Thoughtful selection of AI tool with clear justification
  - Effective application of AI tool to dataset
  - Critical evaluation of AI-generated results
3. Comparison of AI-driven and traditional segmentation (15 points)
  - Clear comparison between AI and traditional methods
  - Insightful analysis of differences and similarities

4. Development of targeted marketing strategies (20 points)
  - Creative and relevant strategies for each AI-identified segment
  - Clear connection between AI insights and marketing decisions
5. Critical thinking and ethical considerations (20 points)
  - Thorough examination of AI limitations, biases, and ethical concerns
  - Thoughtful recommendations for combining AI and human expertise
6. Report quality and presentation (10 points)
  - Clear, well-organized, and professional presentation of findings
  - Proper citation of sources and data