Using AI to Decode Qualitative Research

Research and insights leaders are on a mission to help their organizations make better strategic decisions and create products, services and experiences that customers love. But they face a number of challenges getting reliable, actionable insights into their customer's needs, wants, and motivations.

With self-learning, bespoke language models and built-in statistical analysis, Beehive AI's generative AI platform helps researchers effectively tap into the voice of their customers by quickly, safely, and accurately analyzing their qualitative data.

Qualitative research: The data researchers can't ignore

Your customers are complex, representing a diverse and dynamic set of experiences, needs, preferences, and emotions. As a research and insights leader, you are responsible for generating customer insights that help your organization make products, services, and experiences that your customers will love and that will set you apart from the competition.

Consider this: **59% of consumers feel companies have lost touch with the human element of customer experience (PwC)**. Qualitative data is integral to almost all research, as it delves into the human aspects of product interactions and needs, offering rich insights that quantitative data might overlook.

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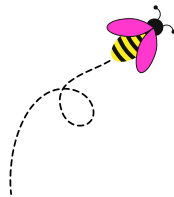
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By tapping into the actual words of their customers, research leaders can help their organizations regain this human element, build customer empathy and center decisions that reflect customer motivations.

But analyzing qualitative data effectively can prove challenging. If you have more than a handful of responses, manual approaches leave you exposed to bias and a myopic POV based on limited sampling. Tools that leverage traditional ML/NLP-based capabilities to analyze qualitative data are manual and time-consuming, and generate basic insights (word clouds, sentiment, driver analysis) that do not capture the business's context, or the diversity of the customer's experiences, needs, and emotions.

The opportunity for AI

53% of researchers say quantitative research results are "highly valued - most business decisions are influenced by this" whereas only 27% said the same of qualitative research results (Fuel Cycle)

New innovations in generative AI are novel, yet have failed to produce quality insights that business owners can rely on. These challenges have led many companies to overly focus on quantitative data, which can leave out the important "why" behind the "what" and leave you exposed to competitive threats.

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So how can research and insights leaders navigate this ever-changing landscape and find an AI solution that helps them tap into the power of qualitative data more effectively?

Beehive AI has pulled together this short guide to help you evaluate AI solutions and integrate them into your research program. We'll walk through:

- The importance of qualitative data in research

- AI's role in analyzing qualitative data

- Steps and considerations when integrating AI into your qualitative analysis

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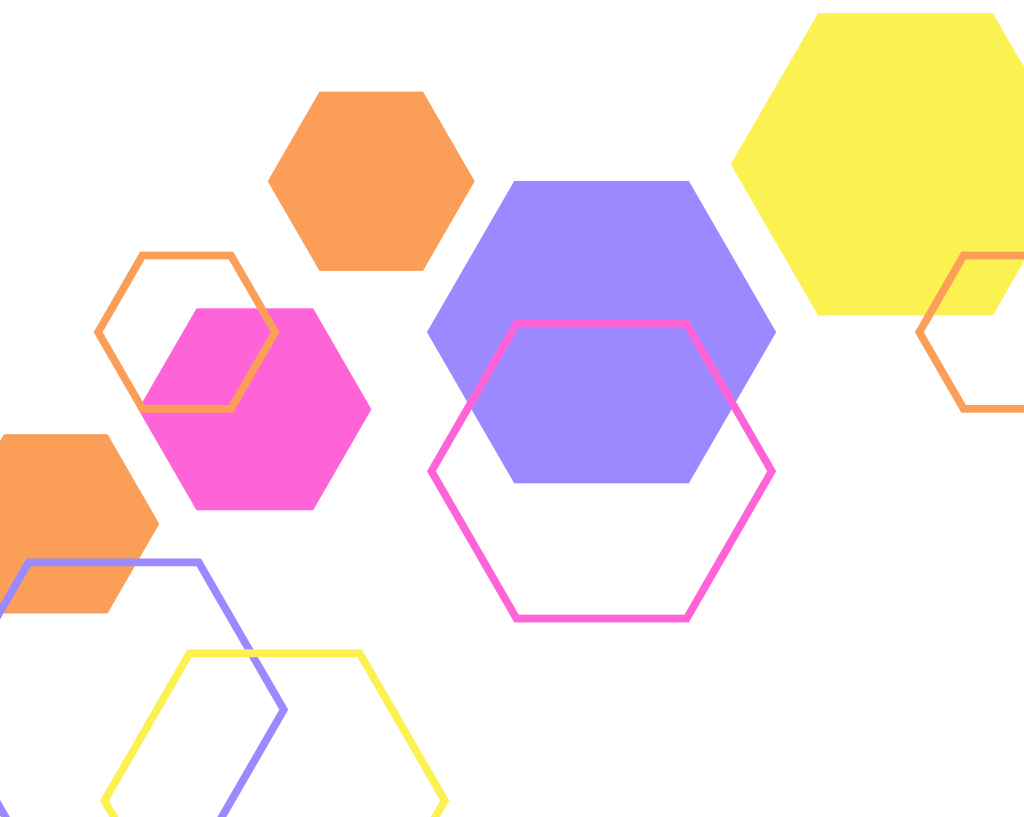
Importance of Qualitative Data in Research

Qualitative data impacts multiple aspects of research:

Understanding User Behavior: Qualitative research delves deep into understanding user attitudes, motivations, and perceptions. It helps uncover the "why" behind user actions, providing insights into their needs and pain points.

Idea Generation and Validation: Through methods like open-ended survey questions, interviews, focus groups, and observations, qualitative research aids in generating and refining ideas. It helps validate concepts by gathering feedback directly from users, ensuring that the product or strategic direction aligns with their expectations.

Iterative Development: Continuous feedback loops are crucial in research, as the market and customer preferences are constantly changing. Qualitative research facilitates iterative improvements by identifying issues early in the process and validating changes or new features before implementation.

Human-Centered Design: Qualitative research fosters a human-centered design approach by placing users at the core of the development process. This leads to products and experiences that are intuitive, user-friendly, and tailored to meet user needs.

Top use cases for qualitative research
New Product Concept Analysis (44%) and Attitudes and Usage (42%) were cited by researchers as top qualitative use cases (Fuelcycle)

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AI's role in analyzing qualitative data

AI can be applied in a number of ways to analyze qualitative data:

Natural Language Processing (NLP): NLP algorithms can process large volumes of textual data from sources like interviews, surveys, social media, and more. AI helps categorize, summarize, and identify patterns within unstructured data.

Sentiment Analysis: AI-driven sentiment analysis tools can discern emotions and opinions expressed in text. This aids in understanding user sentiments towards a product, identifying areas of improvement or satisfaction.

Topic Modeling: AI-powered topic modeling algorithms, like Latent Dirichlet Allocation (LDA), cluster similar themes or topics within qualitative data. This aids in identifying prevalent trends or issues across user feedback.

Speech Recognition: For qualitative data collected through audio or video recordings, AI-driven speech recognition converts spoken words into text, enabling analysis through NLP techniques.

How are researchers using AI for analysis?
(User Interviews Report, 2023)

40% qualitative coding

38% statistical analysis

34% sentiment analysis

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AI's role in analyzing qualitative data (continued)

Advanced Analytics: AI can perform advanced analytics, such as predictive modeling, to anticipate user behaviors based on qualitative data patterns, enabling proactive product enhancements.

Generative Insights: New advances in generative AI can automatically surface key takeaways and trends, and allows users to query data using natural language prompts.

Integrating AI into qualitative analysis

To effectively leverage AI in analyzing qualitative data, researchers should address the following steps:

Selecting the Right Tools: Choose AI-powered tools or platforms specialized in qualitative analysis, considering factors like accuracy, scalability, and compatibility with your data sources.

Data Preprocessing: Prepare your qualitative data by cleaning, organizing, and formatting it appropriately for AI analysis. This step ensures better accuracy in results.

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Integrating AI into qualitative analysis (continued)

Model training and maintenance: To avoid data hallucinations, biases, and other problematic outcomes, think carefully about the data used to train the AI models and how you maintain the model's accuracy and relevancy over time.

Security, Ethics, and Data Protection: Data literacy is critical when using AI tools. Understanding corporate data security and privacy standards, and taking the right steps to safeguard your data is key to successful AI adoption.

Interpretation and Validation: While AI provides powerful insights, human interpretation is crucial. Validate AI-generated findings through human analysis to ensure context and accuracy

"Some people call this artificial intelligence, but the reality is this technology will enhance us. So instead of artificial intelligence, I think we'll augment our intelligence."

-- Ginni Rometty, former CEO of IBM

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Considerations when evaluating AI tools

There are a variety of ways AI can be used to analyze qualitative data. When evaluating AI tools, researchers should consider the following:

Traditional ML/NLP vs. Generative AI: Traditional ML/NLP tools can be manual and challenging to maintain, and deliver unreliable insights, despite all the work. In contrast, generative AI automates setup and upkeep, continually learning and improving.

Generic vs. Bespoke: Using generic generative AI solutions like ChatGPT may result in generic and less relevant insights (and pose risks of data breach). Consider bespoke solutions with proprietary LLMs tailored to your business for more accurate and actionable results.

Build vs. Buy: Building custom LLMs and AI layers can be costly to implement, scale, and maintain. Consider solutions that incorporate tailored LLMs trained on your data to reap the benefits without the high expenses. In either case, human oversight for validation is crucial for ensuring trustworthy results.

"The quality of an AI tool — and the value it can bring your organization — is enabled by the quality of the ground truth used to train and validate it."
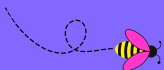
-- MIT Sloan Management Review

How Beehive AI can help you uplevel your research program with generative AI designed for your qualitative data

Get to insights more quickly with generative AI-powered insights that combine quantitative and qualitative data

- More quickly analyze qualitative data with auto-generated and adaptive topics and categorization - no manual set up required. No manual adjustments of categories over time

- Easily ingest data via built-in connectors or CSV uploads from any insights program or source

- Increase speed to insights, with LLMs that are trained in hours rather than weeks

- Get to what matters most with AI-generated key takeaways that you can explore further
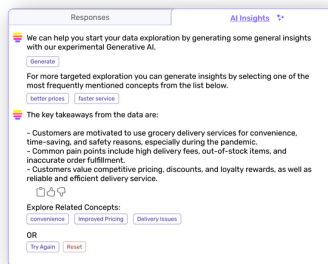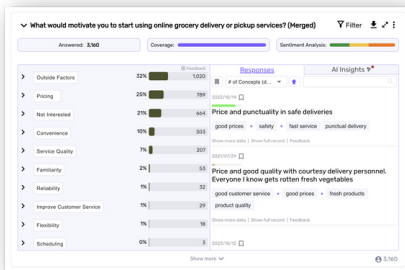
Get more reliable insights that reflect your business context and the complexity of your customers

- Generate insights that reflect your unique business context with bespoke LLMs that power qualitative analysis

- Be confident in your insights, with built-in statistical analysis applied to both qualitative and quantitative data

- Benefit from continuously improving insights with human "fact checkers" that validate AI analysis on an ongoing basis (statistical sampling)
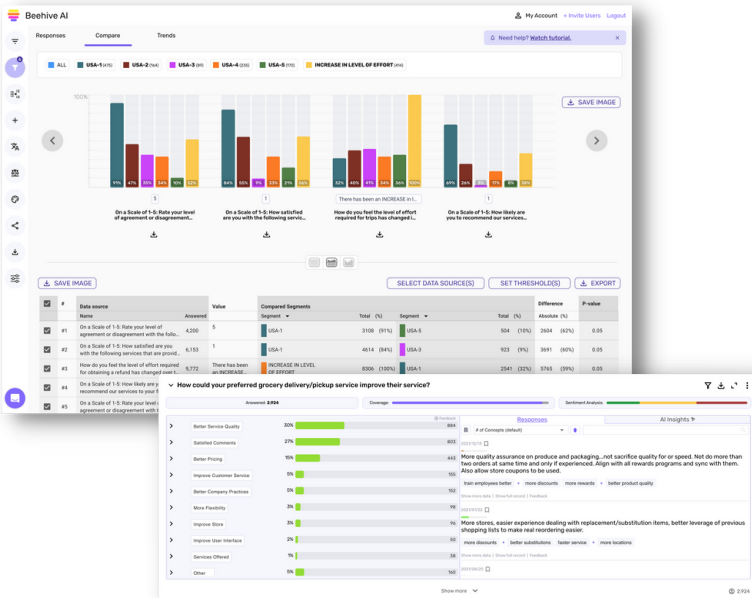
Embed customer-centricity across your organization with easy-to-query centralized customer insights

- Analyze qualitative from any program with consistent methods and categories / topics, powered by bespoke LLMs for your organization

- Easily tailor insights and share with key stakeholders using custom dashboards & reports

- Activate employees across the organization with views tailored to their role and focus area

- Embed insights across the organization with natural-language query tools and AI assistants

How Nectar increased order values

Nectar, the fastest growing e-commerce retailer in North America, was looking to expand order values with new products to offer customers. Nectar used **Beehive AI** to analyze tens of thousands of open-ended survey questions, and combined it with value quantitative data such as demographics and NPS. This analysis uncovered an opportunity to offer a complimentary product to a segment that was highly likely to purchase.

Over 25% of Nectar's customers purchase the complimentary product when buying their mattress, increasing order values by 10% for those customers.

1000s
of open-ended responses analyzed

25%
of customers purchased new offering

10%
increase in order value among purchasing customers

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More confident qualitative analysis.

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