HPI d—school

AI-enhanced Design Thinking

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Content

Disclaimer:

This paper, finalized in April 2024 and based on the capabilities of GPT-4, reflects the use cases and possibilities understood at the time. It's important to note that as AI technology evolves, particularly with subsequent upgrades beyond GPT-4, the applications and effectiveness of AI in Design Thinking and other areas are likely to expand and change. Readers should consider this context when applying insights from this document to future projects and strategies.

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1. Introduction

In an era where rapid technological advancements and the unpredictability of a BANI world (Brittle, Anxious, Nonlinear, Incomprehensible) challenge the traditional paradigms of innovation, Design Thinking has emerged as a promising approach of adaptability and creativity. As a methodology deeply rooted in understanding human needs, fostering iterative experimentation, and promoting collaborative problem-solving, Design Thinking has proven to be an invaluable asset in navigating the complexities of modern-day challenges (for example, see Cankurtaran/Beverland, 2020; Micheli et al. 2018; Gruber et al., 2015). However, as we delve deeper into the intricacies of this era, it becomes evident that even the most seasoned Design Thinking teams encounter limitations when faced with the sheer volume of data, the diversity of perspectives, and the pressure to accelerate innovation cycles (for example, see Fayard/Fathallah 2024). This confluence of factors necessitates a re-imagining of how Design Thinking is applied, leading us to explore the symbiotic relationship between human creativity and artificial intelligence (AI).

At the heart of our exploration is the belief that AI, when thoughtfully integrated into Design Thinking, not only complements but also significantly enhances human capabilities in creativity and problem-solving. This synergy holds the potential to refine the application of Design Thinking, enabling teams to navigate the innovation process with greater ease and effectiveness (see also Bouschery et al., 2023 & O'Toole/ Emőke-Ágnes, 2024).

For the first part of the Design Thinking process which is about **problem identification,** harnessing AI's capabilities enables us to better process and analyze vast amounts of data, identify patterns, and generate insights at a scale and speed unattainable by humans alone. This analytical prowess not only allows us to uncover hidden needs and predict emerging trends but also significantly broadens the perspectives we consider when tackling complex problems. By integrating AI, we enrich our understanding and approach to these challenges with a more comprehensive and diverse set of viewpoints, ensuring that our solutions are well-rounded and deeply informed. Furthermore, AI's ability to sift through and make sense of extensive information empowers us to make more well-informed decisions throughout the innovation process, setting a solid foundation for addressing complex challenges with enhanced clarity and foresight.

For the other part of the process, the **solution development,** AI transcends its role as a mere analytical tool, becoming a pivotal partner in the creative journey. It enables a seamless, dynamic process of developing, refining, and evaluating ideas, thus facilitating a departure from the constraints of traditional linear innovation phases towards a more fluid and iterative exploration of solutions. AI's unique ability to swiftly re-combine data and generate ideas as well as the capability for rapid visualization and scenario simulation brings concepts to life quicker than ever, accelerating the path from idea to prototype. This not only speeds up decision-making but also fosters team autonomy, lessening the reliance on outside expertise. Additionally, AI introduces more frequent and insightful feedback loops, integrating data-driven insights for continuous refinement.

However, while the integration of AI into the Design Thinking process offers vast potential for enhancing creativity and innovation, it is not without its skeptics. Concerns range from fears of diminishing the intrinsic creative intuition that is the cornerstone of innovation,

to apprehensions about de-skilling, creating an over-reliance on technology, and navigating ethical quandaries. Critics argue that the essence of Design Thinking – its human-centric approach and the nuanced understanding that comes from deep empathy – may be compromised if technology overshadows human intuition and creativity. Moreover, there is a fear that an over-reliance on AI could lead to a devaluation of human skills and capabilities, while ethical considerations around AI use pose significant challenges that must be addressed with care and transparency. Besides many more concerns, one of the biggest worries is about the environmental impact of AI, particularly regarding the substantial energy consumption required for its operation, highlighting the need for sustainable practices in its implementation.

Acknowledging these concerns, this paper advocates for a future of innovation and problem-solving characterized by a carefully crafted synergy of AI and human ingenuity. By exploring the dynamic interplay between AI and Design Thinking, we aim to navigate the complexities of today's challenges with unparalleled insight and foresight, ensuring that our approach to innovation remains both forward-thinking and deeply rooted in human values.

2. Enhancing Design Thinking with AI: AI's Role from Problem Identification to Solution Development

AI's application within Design Thinking is multifaceted, serving as a pivotal tool in some phases while offering supportive enhancements in others. This paper delves into how AI, while not altering the core principles of Design Thinking (for example, see Micheli et al., 2018), aids teams in applying these principles more effectively and innovatively. We will explore specific examples illustrating how AI can be employed across different stages of the Design Thinking journey in a targeted way. From the initial stages of problem identification to the final stages of solution development, AI's contributions are both diverse and significant. This exploration aims to provide actionable insights into harnessing AI's full potential, thus elevating the conventional Design Thinking practice to a more sophisticated, AI-integrated approach.

2.1 Enhancing the Problem Identification Process

Here, we will have a look at the following three aspects: *Broadening Perspectives, Uncovering Hidden Connections, Needs, and Problems,* and *Envisioning Future Scenarios for Better Decision-Making.*

Broadening Perspectives

In tackling complex design challenges, one significant hurdle is drawing on vast information pools while effectively focusing the inquiry to ensure relevance and manageability. This balance is crucial in broadening perspectives without losing sight of the core problems. Furthermore, gaining access to relevant users for meaningful engagement poses its own set

of challenges, particularly when target users are inaccessible or hard to reach. Then, conducting effective interviews, an essential component of understanding user needs, demands not only access but also the ability to elicit deep, insightful responses – a skill that's often being underestimated. AI can significantly alleviate these challenges, offering new possibilities to broadening perspectives in the problem identification phase (see also Blessing et al., 2023):

- **Synthesizing Extensive Information:** AI's robust analytical capabilities allow it to process and synthesize vast amounts of data, helping teams to draw relevant information without getting overwhelmed. By sifting through data from various sources, AI can highlight patterns and insights that might not be immediately apparent, assisting teams in comprehending the broader context of their challenge.

- **Refining the Challenge Focus:** Through natural language processing and machine learning algorithms, AI can aid in distilling large datasets into actionable insights, helping teams to focus their question more effectively. This ensures that the problem space is neither too broad nor too narrowly defined, balancing breadth with specificity.

- **Facilitating User Access and Insights:** When direct access to users is constrained, AI can simulate user interactions and create detailed personas based on available data. This approach provides an alternative pathway to user insights, which can be particularly valuable in early stages or when seeking to understand a global or diverse user base.

- **Enhancing Interview Techniques:** AI can support interview preparation by analyzing successful interview strategies and suggesting optimized questions. Moreover, AI can simulate interview scenarios, offering teams the opportunity to train and improve their interviewing skills in a controlled environment. This dual approach ensures that actual user interviews yield richer, more actionable insights.

Uncovering Hidden Connections, Needs, and Problems

In the intricate process of Design Thinking, a pivotal challenge lies in the handling, processing, and meaningful interpretation of large data volumes. The ability to detect underlying connections and patterns within this data is essential but often daunting due to its complexity and scope. Additionally, distilling these insights into precise, actionable problem statements and questions poses a significant hurdle, impacting the subsequent phases of ideation and solution development.

AI addresses these challenges head-on, enhancing the process of uncovering hidden connections, needs, and problems (see also Youvan, 2023):

- **Processing and Structuring Large Data Sets:** AI can manage and analyze large volumes of data efficiently, transforming raw data into structured, interpretable formats. This capability allows design thinkers to navigate through information seamlessly and identify relevant insights without being bogged down by data overload.

- **Detecting Patterns and Relationships:** Through advanced algorithms, AI can identify subtle correlations and patterns that human analysis might overlook. This deep analytical capability enables the discovery of hidden needs and problems, illuminating areas that require attention or innovation previously unrecognized.

- **Articulating Precise Problem Statements:** Once AI has identified relevant patterns and insights, it can assist in synthesizing these findings into clear, concise problem statements. By leveraging natural language processing, AI helps refine vast datasets and complex insights into understandable and actionable statements, providing a solid foundation for the subsequent stages of the Design Thinking process.

Envisioning Future Scenarios for Better Decision-Making

A critical aspect of Design Thinking involves not just identifying current challenges and needs but also contextualizing findings within broader, often future-oriented, frameworks. The ability to gauge the relevance of identified themes and trends for future scenarios is crucial for strategic planning but can be highly challenging due to the speculative nature of future-oriented thinking and the vast array of variables involved. Additionally, translating these contextualized insights into strategic decisions requires a depth of analysis and foresight that extends beyond conventional methods.

AI significantly aids in overcoming these challenges, offering new dimensions to the envisioning of future scenarios (see also Smolic, 2023; Takyar, 2023 & World Economic Forum, 2023):

- **Contextualizing Findings:** AI helps integrate and contextualize vast amounts of data within larger trends and potential future states, allowing design thinkers to see beyond immediate insights. By employing predictive analytics and trend analysis, AI provides a clearer understanding of how current findings might evolve, influencing future user needs and market dynamics.

- **Assessing Relevance of Identified Themes:** Through AI's advanced data processing capabilities, it can evaluate the potential impact and relevance of identified themes over time. This involves not just simple extrapolation but complex modeling of various future scenarios based on current trends and data, thereby aiding teams in prioritizing areas with the most significant future implications.

- **Making Strategic Decisions:** Armed with a more nuanced understanding of the future landscape, design thinkers can use AI to simulate outcomes of different strategic choices, providing a robust foundation for decision-making. AI's ability to analyze multiple future scenarios simultaneously and forecast their potential outcomes enables more informed, strategic decisions that are aligned with long-term objectives and anticipated changes in user needs and market conditions.

2.2 Enhancing the Solution Development Process

In this section, we will take a glance at these three aspects: *Generating More Diverse Solution Pathways, Accelerating Prototyping with Rapid Visualization,* and *Refining Solutions with Data-Driven Feedback Loops:*

Generating More Diverse Solution Pathways

In the dynamic terrain of solution development, design thinkers are tasked with both generating a wide range of ideas as well as organizing these ideas into coherent clusters for better analysis and decision-making. Then, creating a solid foundation for idea selection requires establishing clear, relevant evaluation criteria, which in itself is a significant challenge. Furthermore, refining and articulating these ideas into well-defined concepts presents another layer of complexity, demanding various skills such as creativity and strategic thinking.

AI can play a highly supportive role in addressing these challenges and fostering the generation of more diverse solution pathways (see also Ali Elfa/Dawood, 2023; Giannigiacomelli, 2023; Mollick, 2023 & Ivčević/Grandinetti, 2024):

- **Idea Generation and Diversification:** AI can significantly expand the ideation process by generating a vast array of ideas based on data patterns, user behavior, and market trends. By tapping into diverse data sources, AI algorithms can suggest unique combinations and perspectives that may not be immediately obvious, thereby enhancing the variety and depth of the solution pool.

- **Cluster Formation:** Through machine learning techniques, AI can organize these varied ideas into clusters based on underlying themes or similarities. This helps teams to navigate the ideation landscape more effectively, identifying potential areas of focus or combining different ideas to create novel solutions.

- **Establishing Evaluation Criteria:** AI can assist in formulating objective, data-driven criteria for idea evaluation by analyzing past project successes and industry standards, as well as current market and user data. This ensures that the selection process is grounded in reality and aligned with strategic goals, helping teams to prioritize ideas with the highest potential impact.

- **Refining and Articulating Ideas:** Once initial ideas are generated and selected, AI tools can aid in sharpening and detailing these concepts. From enhancing language clarity to ensuring the ideas meet identified user needs and business objectives, AI can provide valuable feedback and suggestions for improvement, enabling teams to develop well-defined, actionable solutions.

Accelerating Prototyping with Rapid Visualization

Transforming an abstract idea into a tangible prototype presents a significant challenge, especially when the conceptual leap is large or when the idea is complex. This challenge is compounded if the team possesses limited prototyping and visualization skills, which can

stall the development process. Furthermore, the modern innovation landscape demands rapid iteration cycles, with multiple prototypes being developed in parallel to test a range of solutions, pushing the boundaries of traditional prototyping capabilities.

AI offers compelling solutions to these challenges, elevating the prototyping phase and enabling rapid visualization (see also Liu, 2024):

- **Streamlining Idea Translation:** AI tools can guide teams in transforming abstract concepts into concrete prototypes, for instance by suggesting suitable design elements, structures, and functionalities. This AI-assisted guidance helps bridge the gap between idea and implementation, enabling teams to visualize and materialize their concepts with greater clarity and relevance.

- **Enhancing Team Capabilities:** AI can compensate for limited prototyping skills within a team by providing intuitive, user-friendly tools that simplify the creation of detailed prototypes and versatile visualizations. These tools can offer suggestions, automate repetitive tasks, and provide templates or best practices, making high-quality prototyping accessible to all team members, regardless of their expertise level.

- **Facilitating Rapid Iterations:** With AI, teams can develop and test multiple prototypes in parallel at an unprecedented pace. AI can quickly render changes, suggest variations, and even predict the effectiveness of different prototype versions based on user data and feedback loops. This accelerates the iteration cycle, allowing teams to explore a wider array of solutions and refine their prototypes more effectively based on real-time insights.

Refining Solutions with Data-Driven Feedback Loops

Continuous iteration and refinement is crucial in the Design Thinking process, where solutions evolve through ongoing reflection, testing and feedback. However, specifically in the testing phase, creating effective test scenarios, gaining access to appropriate users for real-world testing, incorporating feedback effectively, and ensuring decisions align with broader strategic contexts present significant challenges. Each of these steps is vital for honing solutions that are not only innovative but also viable and impactful.

AI significantly aids in overcoming these hurdles and enhancing solution refinement (see also Hagiu, 2023):

- **Designing Effective Test Scenarios:** AI can guide the translation process from prototypes to impactful and effective testing by suggesting targeted test scenarios based on the prototype's features and intended user interactions. AI can provide actionable recommendations, helping teams design tests that are both relevant and insightful, ensuring a meaningful transition from concept to user experience.

- **Enhancing User Engagement and Testing Opportunities:** AI can simulate user interactions and feedback, offering an alternative when access to actual users is limited. Virtual user testing, driven by AI, can provide preliminary insights into user behavior and solution efficacy, allowing teams to make informed adjustments even before accessing real test groups.

- **Incorporating Feedback into Iterations:** AI plays a critical role in analyzing feedback from testing, identifying patterns, and highlighting areas needing improvement. By processing large volumes of feedback data, AI helps teams understand user responses in depth, ensuring that revisions are targeted and effective.

- **Contextualizing Iterative Decisions:** AI assists in framing each iteration within the larger strategic context, ensuring that changes not only align with user needs but also with other criteria such as long-term goals and market demands. By considering strategic factors as for instance market trends, competitor actions, and emerging technologies, AI helps ensure that each iteration moves the solution closer to successful implementation.

3. Principles for Human-AI Collaboration in Design Thinking

Transitioning from our exploration of AI's role in enhancing the Design Thinking process, it becomes imperative to consider the principles underlying this collaboration between human and machine. As we integrate AI into creative problem-solving, establishing a set of guiding principles ensures that this partnership remains productive, ethical, and human-centric. This last section, outlines the foundational tenets that should govern the interaction between designers and artificial intelligence (see also Wilson, 2019; Wu et al., 2021 & Kolbjørnsrud, 2023).

1. Data-Driven Support, Human Decision-Making

- **What it means:** This principle focuses on the collaboration between AI's ability to analyze large datasets to uncover insights and the human capacity for contextual judgment and ethical consideration. AI tools can sift through data to identify patterns, trends, and anomalies, offering a foundation of evidence upon which humans can base decisions. However, the ultimate decision-making authority rests with humans, who can interpret AI findings within a broader context that includes ethical, cultural, and social considerations.

- **Why it's important:** The integration of data-driven insights with human judgment ensures that decisions are not only informed by comprehensive data analysis but also tempered with human values and ethics. This balance is crucial for making decisions that are both effective and responsible, particularly in complex scenarios where data alone cannot capture the full spectrum of relevant factors.

2. Dynamic Iteration through AI

- **What it means:** Leveraging AI for dynamic iteration involves using artificial intelligence to continuously refine and adapt solutions based on new information and feedback. This approach allows for the rapid processing of inputs and the implementation of changes, facilitating a more agile and responsive design process.

- **Why it's important:** The ability to iterate dynamically is essential for staying aligned with evolving user needs, market trends, and technological advancements. It ensures that solutions remain relevant and effective over time, fostering innovation and preventing stagnation.

3. Finding the Right Balance between AI Assistance and Human Skills

- **What it means:** This principle calls for a careful assessment of when and how to use AI to support human creativity, judgment, and decision-making without fostering over-reliance on technology.

- **Why it's important:** Maintaining this balance is key to leveraging the strengths of both AI and human intelligence. It ensures that the creative and empathetic aspects of design thinking are preserved while harnessing the analytical power of AI for improved efficiency and insight.

4. Continuous Learning for Both AI Systems and Human Teams

- **What it means:** Continuous learning emphasizes the need for both AI systems and human teams to evolve and adapt over time. For AI, this means learning from new data and interactions to improve performance. For humans, it involves staying updated on AI capabilities and how to best integrate AI insights into the design process.

- **Why it's important:** Embracing continuous learning ensures that the collaboration between AI and humans grows more effective and sophisticated over time. It enables teams to stay at the forefront of technological advancements and apply the latest insights to their work, leading to more innovative and impactful solutions.

5. Upholding Ethical Standards

- **What it means:** Integrating AI into design thinking must be guided by a strong ethical framework. This involves ensuring that AI applications are developed and used in ways that respect individual rights, promote fairness, and are transparent and accountable.

- **Why it's important:** Ethical considerations are paramount for building trust and credibility, not just with users but across all stakeholders. By upholding high ethical standards, organizations can ensure that their use of AI contributes positively to society and avoids harmful consequences.

6. Transparency and Trust in AI Systems

- **What it means:** This principle calls for openness about how AI systems function, make decisions, and are integrated into broader processes. It encompasses the need for clear communication regarding the capabilities, limitations, and decision-making criteria of AI tools.

- **Why it's important:** Transparency is foundational to building trust among users, stakeholders, and team members. Trust, in turn, is essential for the effective adoption and use of AI technologies. When people have a clear understanding of how AI works, they are more likely to rely on it as a valuable tool in the design thinking process.

By embedding these principles into the AI integration process, design thinkers can ensure that their methodologies remain human-centric, ethical, and continuously evolving, aligning with both current needs and future visions. This approach not only makes the integration of AI into Design Thinking more effective but also ensures that the outcomes are beneficial, ethical, and widely accepted.

4. Outro

In this paper, we have explored the transformative potential of integrating Artificial Intelligence (AI) into the Design Thinking process, particularly in the context of a rapidly evolving BANI world. We delved into the unique challenges and opportunities presented in both the problem identification and solution development spaces, illustrating how AI can amplify human creativity, enhance decision-making, and foster more inclusive and innovative outcomes.

We began by examining how AI can assist in broadening perspectives, uncovering hidden connections, and envisioning future scenarios, thereby enriching the problem-identification phase with deeper insights and foresight. In the solution space, we demonstrated AI's capacity to generate diverse pathways, accelerate prototyping, and refine solutions through data-driven feedback loops, ensuring that the iterative process of Design Thinking becomes more dynamic and responsive.

Further, we outlined six guiding principles for Human-AI collaboration in Design Thinking. These principles – ranging from maintaining data-driven support with human decision-making to ensuring continuous learning and ethical responsibility – serve as a foundation for integrating AI in a manner that respects and enhances human values, fosters ethical innovation, and promotes inclusivity and transparency.

As we conclude, it is clear that the synergy between AI and Design Thinking offers a powerful pathway to tackling complex challenges in today's unpredictable world. However, this journey is not without its challenges. It requires a delicate balance between leveraging technological advancements and maintaining the human-centric essence of Design Thinking. By adhering to the outlined principles, we can navigate these challenges, ensuring that AI acts as an enabler rather than a disruptor of human creativity and empathy.

Looking forward, the integration of AI into Design Thinking is not an endpoint but a continuous journey of learning, adaptation, and collaboration. As technology evolves, so must our approaches, always with an eye towards enhancing human well-being and fostering a more innovative, inclusive, and sustainable future.

In embracing this journey, we invite Design Thinkers, innovators, and organizations worldwide to consider not just how AI can be used to enhance Design Thinking, but how, together, they can forge a new frontier in creative problem-solving that is truly reflective of the needs, challenges, and aspirations of humanity in the 21st century.

5. Tools & Examples

The amount of AI tools and the possibilities are endless and changing every day. Following, please find a few tools we like (March 2024), which of course is an incomplete list. Furthermore, we will share some examples along the six aspects from above.

5.1 Tools We Like

Text generation & more:

ChatGPT, Claude 3, Gemini & Perplexity: AI models designed to generate human-like text responses, engage in conversations, answer questions, and perform specific language-related tasks based on prompts given by users. They come with different extra functions such as data analysis, image generation, vision & speech and custom GPTs. Also, specifically Perplexity is great for internet research.

Design:

Canva: An online design and visual communication platform with a simple drag-and-drop interface and a wide range of templates and tools, including many AI features, all in one place.

Midjourney: This tool generates high-quality images and art from textual descriptions, catering to artists and designers for inspiration and content creation.

Uizard: Here, you can generate UI designs from text prompts and edit them with an easy-to-use, drag-and-drop editor.

Krea.ai: This tool makes it possible to generate high-quality visuals in real-time based on various input.

HeyGen: HeyGen is an AI video creation tool that simplifies the process of generating engaging videos using generative AI. You can use various input for high-quality video output.

Others:

Trendhunter AI: This platform leverages artificial intelligence to identify and analyze the latest trends across various industries, providing insights and forecasts to help businesses stay ahead.

Synthetic Users: Synthetic Users are created by AI technologies to simulate real user interactions for the purpose of testing and training applications, offering realistic scenarios and behaviors for improved user experience and system testing.

5.2 Examples/Use Cases

1. Broadening Perspectives

To broaden perspectives in understanding a challenge, teams can analyze available online data, for example scraping product reviews for a tent. Then, the AI tools can identify common patterns and even suggest design improvements. For example, if reviews frequently highlight the need for better waterproofing, AI can pinpoint this as a key area for enhancement. This method ensures design efforts are directly informed by existing data, offering a strategy to integrate wider perspectives into the design process effectively.

Scraping reviews for a tent on amazon.com

Tiberius

★☆☆☆☆ **Shock cord in two of the three poles broke.**

Rezension aus den Vereinigten Staaten vom 14. September 2020

Größe: Einheitsgröße | Farbe: Palmengrün | **Verifizierter Kauf**

Shock cord In two of the three poles broke -- before I could put it up the second time! Before we went camping, I set it up, which was easy. I aired it out and used Coleman seam sealer as suggested in several reviews. Giving it time to dry, I took it down the next morning.

Friday on Labor Day weekend, I went to put it up, and the shock cord simply unraveled on one pole -- broke. Undaunted I was going to figure out something. As I began to straighten the other long pole, same thing happened in the same way. At this point I was rather daunted.

Fortunately, we were not camping far from home. I have two older tents in the garage -- much older. I was able to find two poles of about the same length and diameter. I was able to put up this new tent that way. It's not quite perfect, but it saved the weekend. To recap, I used poles from a tent that was over 10 years old, and the shock cord was still elastic enough and in good enough condition. Only the second time I tried to put of the new tent, the shock cord failed.

It rained twice that weekend. Once it rained two hours straight without let up. The next time it rained off and on for several hours. There were no leaks at all. I cannot say if it would have without the seam sealer. One note, a good wind will blow in rain underneath the rain fly. The mesh makes up nearly all of two of the walls, and the rain fly only extends a few inches below. I suppose adjusting the guy lines or stakes might help keep out rain in a strong wind, but I can assure you the wind will blow in rain if it hits hard enough and from a certain direction. Beware.

This is definitely not a cold weather tent -- not even a mid to late fall tent. Further, with the rain fly on and tightly secured, there is not that much air flow, and it did get it pretty warm (hot) inside. Adjusting the rain fly without completely removing it is possible and not too much of a headache.

In conclusion, my experience with this tent leaves me giving it a one star, because that's all I can do. In fact, it's a negative five stars because it was broken and thus didn't work. Rarely throwing anything out saved me this time. It's past the return window, so I'm not entirely sure where to go from here. I suppose I can get two new poles somehow, but I'm not excited about paying to return the broken ones, which I assume they would want, as that will probably cost me around $15 dollars. Assuming the poles did work, the tent would have been fine. I'm not sure it was what we really needed, but that is on me for not better researching I suppose.

9 Personen fanden diese Informationen hilfreich

Nützlich | Melden

Rezensionen auf Deutsch übersetzen

Jeanie Petermann

★☆☆☆☆ **Fragile**

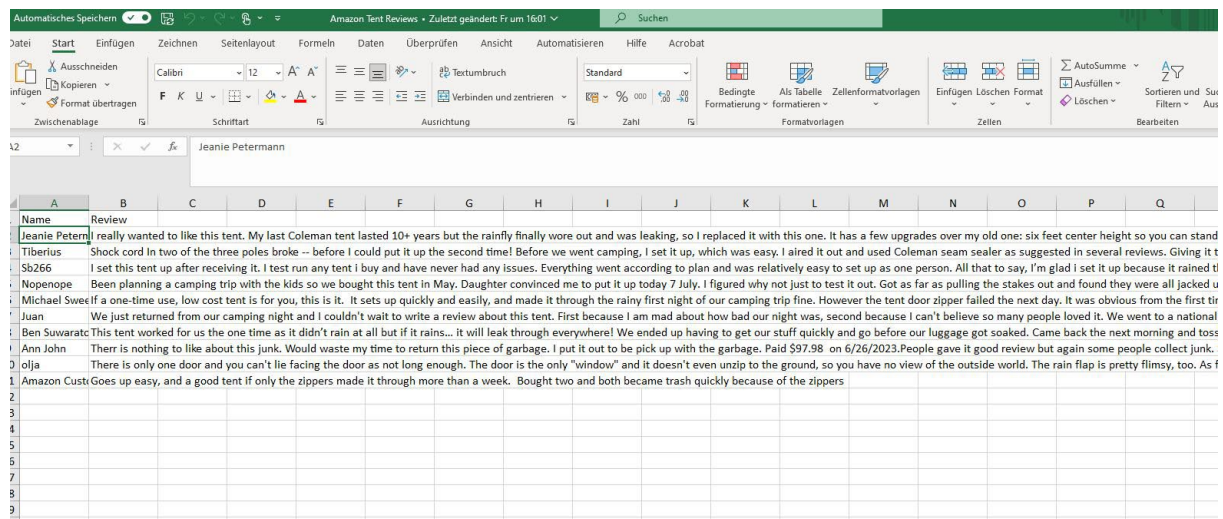Rezension aus den Vereinigten Staaten vom 24. Juli 2023

Größe: Einheitsgröße | Farbe: marineblau | **Verifizierter Kauf**

I really wanted to like this tent. My last Coleman tent lasted 10+ years but the rainfly finally wore out and was leaking, so I replaced it with this one. It has a few upgrades over my old one: six feet center height so you can stand up fully, electrical outlet zipper, no screened in porch (which you can't leave anything in because it will get wet), and I like the color scheme better.

However, this tent is the most fragile, cheap tent I have ever had. Within one use, the rainfly got several holes from flipping it over to let the bottom of the tent dry. One of sections of one of the tent poles has almost completely split apart. And I tried to drag the tent with a few things in it and ripped a hole in the tent. I've used this tent 3-4 times for no more than a few days each. I already need a new tent. I do not recommend this tent.
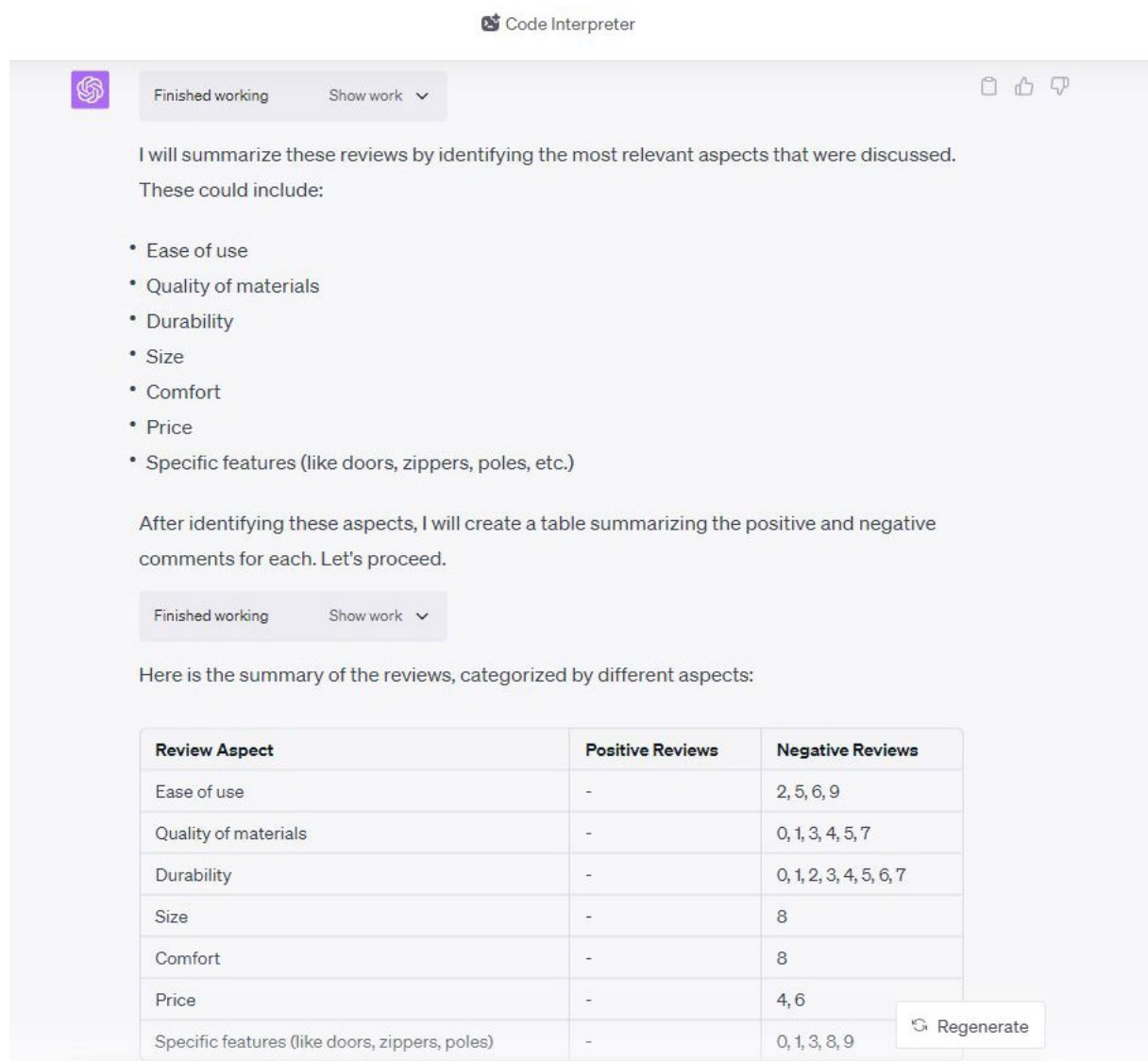
Eine Person fand diese Informationen hilfreich

Nützlich | Melden

Creating a data set with all negative reviews

Targeted summary of data (ChatGPT)

Code Interpreter

Finished working   Show work ∨

I will summarize these reviews by identifying the most relevant aspects that were discussed. These could include:

- Ease of use
- Quality of materials
- Durability
- Size
- Comfort
- Price
- Specific features (like doors, zippers, poles, etc.)

After identifying these aspects, I will create a table summarizing the positive and negative comments for each. Let's proceed.

Finished working   Show work ∨

Here is the summary of the reviews, categorized by different aspects:

Review Aspect	Positive Reviews	Negative Reviews
Ease of use	-	2, 5, 6, 9
Quality of materials	-	0, 1, 3, 4, 5, 7
Durability	-	0, 1, 2, 3, 4, 5, 6, 7
Size	-	8
Comfort	-	8
Price	-	4, 6
Specific features (like doors, zippers, poles)	-	0, 1, 3, 8, 9

Regenerate

Suggestions for Improvement

SA   It seems most criticise the durability. Read through all texts and summarise the top five critics that help me improve the tent.

Sure, I'll provide more detailed information about the top five criticisms regarding the tent's durability. This will include the specific issues that users have reported, which could help in improving the product.

1. **Shock cord in poles broke:** Reviewer 1 mentioned that the shock cord in two of the three poles broke. This could be addressed by using stronger materials in the poles or improving the design to prevent this issue.
2. **Waterproofing issues:** Both Reviewers 0 and 2 mentioned water leakage. The tent's waterproofing could be improved, perhaps by using a higher quality water-resistant material or improving the sealing at the seams.
3. **Zipper malfunction:** Reviewers 3 and 9 pointed out that the zippers did not work properly. The quality and functionality of the zippers could be improved, as these are crucial for the functionality and durability of the tent.
4. **Overall build quality:** Reviewers 0, 3, 4, and 5 all had complaints about the tent breaking or not holding up under normal use. This suggests that the overall build quality and durability of the tent need to be improved.
5. **One-time use:** Reviewers 4 and 6 specifically mentioned that the tent seemed good for only one-time use. This is a major durability issue and suggests that all aspects of the tent's build quality need to be reassessed.

These issues could be addressed in future designs of the tent to improve its durability and overall quality.

2. Uncovering Hidden Connections, Needs, and Problems

In "uncovering hidden connections, needs, and problems", teams can leverage AI to extract and interpret data from e.g., documents containing user research, such as user profiles and quotes. This process might involve the AI analyzing the collected data to define and summarize key issues and even translate them into clear problem statements. Each step can be either done by the AI alone, or in cooperation with the design team (e.g., for interpretation and decision-making).

Data Extraction from an uploaded PDF (with ChatGPT)

ChatGPT

The text extracted from the PDF document appears to be a collection of quotes from four different interviewees: Fiona, Manuel, Friederike, and Jan. Here are the quotes:

1. Fiona:
   - "I hate planning meals up front! It feels like another homework I have to do on a daily basis."
   - "I don't plan my grocery shopping hours, I go to the supermarket directly after work."
   - "My fridge is never empty, always at least half full."
   - "Buying new, weird ingredients is exciting, discovering a new taste."
   - "So many times I forget what is in my fridge and then I realize I just bought the third cucumber."
2. Manuel:
   - "I spent 60 Euros on average on a shopping tour."
   - "Sometimes it happens that I come home with my groceries, I open the fridge and realize: Tom just bought the same stuff and I think damn it, now food will go to waste again and we wasted so much money for nothing!"
   - "I give my excess food to neighbours who are happy to take it before it goes to waste."
   - "We don't produce lots of food waste."
   - "I recently bought a purple carrot. Unfo ↓ ately it molded in the fridge because I did not

Data interpretation

2. Manuel: "Sometimes it happens that I come home with my groceries, I open the fridge and realize: Tom just bought the same stuff and I think damn it, now food will go to waste again and we wasted so much money for nothing!"
   - Functional: Need for a system that syncs grocery shopping between household members to prevent duplication.
   - Emotional: Need to reduce the frustration caused by food waste.
   - Functional: Need to avoid financial waste on groceries.
   - Social: Need for better communication within the household about grocery shopping.
   - Functional: Need for a better system to track what's already in the fridge.
3. Friederike: "I waste at least 250 Euros/month by letting food go to waste or not eating it myself."
   - Functional: Need for a system to better manage food consumption and reduce waste.
   - Functional: Need for a better understanding of personal consumption habits to aid in shopping.
   - Emotional: Need to reduce guilt and st ↓ associated with food waste.

Problem Definition

Let's now interpret three different problems or obstacles that could stand in the way of fulfilling these needs:

1. **Need for a simplified and time-efficient meal planning process.**
   - **Problem 1:** Lack of knowledge or skills to quickly and efficiently plan meals. This could be a result of not knowing how to plan meals, or not having the right tools to do it.
   - **Problem 2:** Overwhelm due to the large variety of meal options, which could lead to decision fatigue and make meal planning a daunting task.
   - **Problem 3:** Existing habits and routines may be hard to change. For instance, some people may be accustomed to making decisions about meals on a day-to-day basis, making it challenging to shift to a more planned approach.
2. **Need for a system that syncs grocery shopping between household members to prevent duplication.**
   - **Problem 1:** Lack of effective communication channels between household members regarding their grocery shopping activities.
   - **Problem 2:** Different shopping preferences and habits among household members can

Summarization

ChatGPT

User	Need	Problem
Fiona, a 26-year-old elementary school teacher who considers herself a bad planner	Needs a way to navigate the complexity and time-intensity of meal planning. She experiences stress and views meal planning as a burdensome task, similar to homework.	The overwhelming number of meal options leads to decision fatigue, making meal planning feel like a daunting task. This is compounded by her own acknowledgment of being a poor planner.
Manuel, a 35-year-old IT engineer who enjoys exploring local cuisines while traveling	Needs to align grocery shopping decisions with other household members to prevent duplication. He has experienced the frustration of duplicative shopping and the resulting food waste.	The absence of a shared platform or tool that can be easily accessed and updated by all household members leads to duplication in grocery purchases and consequent food waste. This problem is accentuated by his keen interest in diverse cuisines and spontaneous food purchases.
Jan, a 43-year-old system administrator and parent, often on business trips	Needs a way to manage food planning and consumption that accommodates his unpredictable schedule. His frequent travel puts him in a position where he must be flexible with food p'⌄ ing.	The unpredictability of his travel schedules makes it difficult to plan meals and grocery shopping in advance, leading to food waste, especially of perishable items. His love for cooking specialty meals adds another layer of complexity to managing food consumption around his travel schedule.

3. Envisioning Future Scenarios for Better Decision-Making

For the aspect of "*Envisioning Future Scenarios for Better Decision-Making*," an example could be based on analyzing user profiles and dietary trends. A restaurant aiming to cater to emerging dietary preferences could analyze a comprehensive report detailing consumer eating habits and preferences. The AI could interpret these trends to predict future dietary needs, such as an increase in plant-based or allergen-free options. By integrating these insights, the restaurant can proactively redesign its menu and service model to accommodate future customer needs, ensuring a tailored dining experience that aligns with anticipated shifts in consumer behavior. This strategic approach allows for informed decision-making that not only meets current demands but also anticipates future trends.

Prompt for targeted analysis of a study report (ChatGPT)

Du

📄 Ernaehrungsreport-2022.pdf
PDF

ChatGPT, you are a consultant specializing in restaurant industry innovations, with a deep understanding of emerging nutrition trends and dietary preferences.

I am working on a project aimed at redesigning the restaurant experience to better accommodate individuals with specific dietary preferences or restrictions. This initiative seeks to anticipate and adapt to the evolving needs of diners, ensuring inclusivity and satisfaction in the dining experience. We have identified a comprehensive report on nutrition trends that could provide valuable insights into future consumer behaviors and expectations.

Analyze the provided report on nutrition trends (Ernährungsreport 2022) and synthesize its findings to identify key trends that could impact the restaurant industry over the next 5-10 years. Based on these trends, envision future scenarios that highlight how restaurants might need to adapt their menus, service models, and dining environments to cater to these emerging dietary preferences and restrictions.

Please provide a concise, insightful analysis that translates complex data into actionable insights. Your output should be forward-looking, offering a clear vision of potential future scenarios in the restaurant industry that stem from the identified nutrition trends. The language should be engaging and professional, suitable for stakeholders in the restaurant and hospitality sectors looking for strategic guidance.

Output key trends

ChatGPT

Based on the comprehensive insights from the "Ernährungsreport 2022," several key nutrition trends and consumer behaviors have been identified that could significantly influence the restaurant industry over the next 5-10 years:

1. **Increased Preference for Vegetarian and Vegan Options**: There's a notable shift towards vegetarian and vegan diets, especially among younger demographics. This trend is driven by concerns for animal welfare, environmental sustainability, and personal health.
2. **Demand for Local and Regional Foods**: Consumers are placing high importance on the origin of their food, with a strong preference for locally sourced and seasonal products. This is tied to desires for freshness, supporting local economies, and reducing environmental impact.
3. **Health and Nutrition Consciousness**: There's a growing emphasis on healthy eating, with consumers seeking out foods that are low in sugar, fat, and salt. The Nutri-Score label, indicating the nutritional quality of food products, has seen increased recognition and influence on purchasing decisions.
4. **Sustainability and Environmental Concerns**: Environmental sustainability is a major concern, influencing consumer choices towards more sustainable eating habits, like reducing meat consumption and avoiding food waste.
5. **Transparency and Information Demand**: Consumers demand more transparency and detailed information on food packaging, including animal welfare, production conditions, and environmental impact.

Future scenarios for the restaurant industry could include:

* **Menu Innovations**: Introduction of more plant-based dishes and alternative proteins to cater to vegetarian and vegan preferences. Menus might also feature a "Nutri-Score" or similar nutritional information to assist health-conscious diners.
* **Local and Seasonal Focus**: Restaurants may increasingly source ingredients locally and seasonally, highlighting the origin of their produce to meet consumer demand for regional foods.
* **Sustainable Practices**: Implementation of sustainable practices, from waste reduction initiatives to energy-efficient operations, could become a significant selling point.
* **Transparency and Engagement**: Restaurants might offer detailed information about their dishes, including sourcing, nutritional content, and environmental impact, possibly through digital platforms for deeper consumer engagement.

Adapting to these trends involves not just menu changes but a holistic approach to how restaurants source ingredients, communicate with customers, and position themselves in a market that increasingly values health, sustainability, and ethics.

Prompt future scenario

Du

Imagine we have transported ourselves into the future, around 5-10 years from now, where the key nutrition trends identified from the "Ernährungsreport 2022" have fully matured and are now mainstream within the restaurant industry. As a consultant with expertise in future-forward restaurant innovations, analyze the impact of these trends on the industry's landscape, focusing on how restaurants have adapted their operations, menus, and marketing strategies to thrive in this new environment.

Now, bringing those future insights back to the present, advise on strategic steps that restaurant owners and chefs can start taking today to align with these future trends. Consider aspects such as menu redesign, supplier partnerships for local and seasonal ingredients, training for kitchen staff on vegetarian and vegan cuisine, and communication strategies to highlight sustainability and health initiatives.

Provide a strategic blueprint that is imaginative yet actionable, offering a mix of short-term initiatives and long-term planning advice. Your analysis should inspire innovation and readiness among restaurant stakeholders, encouraging them to preemptively adapt to these emerging trends for competitive advantage.

Output future scenario

ChatGPT

Impact on the Restaurant Industry's Landscape

In a future where nutrition trends identified from the "Ernährungsreport 2022" are mainstream, the restaurant industry has transformed significantly:

- **Menu Diversity and Innovation**: Menus are now rich with vegetarian, vegan, and alternative protein options. Customization for dietary restrictions is standard, offering diners flexibility and choice.
- **Local and Sustainable Sourcing**: Restaurants have forged strong partnerships with local farmers and producers, shortening supply chains and emphasizing the environmental benefits and freshness of their ingredients.
- **Transparent Communication**: Detailed information about food sourcing, nutritional values, and sustainability practices is readily available through digital platforms, enhancing customer trust and engagement.
- **Operational Efficiency**: Sustainable practices are integral to operations, including waste reduction, energy conservation, and water efficiency, driven by both ethical considerations and cost savings.

Strategic Blueprint for Adapting to Future Trends

For restaurant owners and chefs looking to align with these future trends, consider the following strategic steps:

1. **Menu Redesign**:
   * Begin introducing vegetarian and vegan options, focusing on creativity and flavor to appeal to a broad audience.
   * Experiment with alternative proteins and local, seasonal ingredients to diversify offerings.

2. **Supplier Partnerships**:
   * Identify and establish relationships with local farmers and suppliers to ensure access to fresh, seasonal ingredients.
   * Explore cooperative models to support local agriculture and ensure a steady supply of unique ingredients.

3. **Staff Training**:
   * Invest in training for kitchen staff on vegetarian and vegan cuisine, emphasizing technique, flavor, and presentation.
   * Encourage continuous learning about nutrition and sustainable cooking practices.

4. **Marketing and Communication Strategies**:
   * Develop a communication strategy that highlights your restaurant's commitment to sustainability, health, and local sourcing.
   * Leverage social media and digital platforms to share stories about your ingredients, suppliers, and the environmental impact of your operations.

5. **Sustainability Initiatives**:
   * Implement measures to reduce waste, conserve energy, and recycle within your operations.
   * Consider certifications or accreditations that recognize your sustainability efforts.

6. **Customer Engagement**:
   * Engage customers with interactive experiences, such as farm-to-table events, cooking classes, or ingredient sourcing trips.
   * Use feedback mechanisms to understand customer preferences and adjust offerings accordingly.

7. **Long-term Planning**:
   * Stay informed on evolving consumer trends and adjust your business model to remain competitive and relevant.
   * Continuously innovate your menu and operations to align with sustainability and health trends.

4. Generating More Diverse Solution Pathways

For "*Generating More Diverse Solution Pathways,*" envision a scenario where a project focuses on enhancing a user's ability to integrate handyman appointments into her busy life. Using AI, a system could analyze various strategies to address Christina's needs effectively. This approach illustrates how leveraging AI can lead to the generation of multiple possible solutions to common problems, inspiring the team to consider various alternatives.

Prompt for generating various ideas (ChatGPT)

ChatGPT

You are now acting as a creative expert for the project topic, endowed with the following qualities:

- You are exceptionally creative.
- You are unfazed by limitations of possibility.
- You are capable of versatile, divergent thinking.

Focus on Christina and her problems and needs, and address the specific question: "How can we help Christina integrate handyman appointments efficiently and stress-free into her busy work and family schedule while maintaining flexibility for unexpected schedule changes?"

Generate five ideas along with a one-sentence description for each of the following trigger questions:

1. What if money and resources were no object?
2. How could we solve the problem in an ideal world? No restrictions, just pure ideas.
3. If we only had a €100 budget and the idea needed to be implemented within a month, what ideas come to mind?
4. What are some unconventional ways to solve the problem that might not seem sensible at first glance?
5. Describe various methods to solve the problem that would be considered realistic in the year 2100.

Generated ideas by ChatGPT

1. **If Money and Resources Were No Object:**
   - Employ a personal assistant robot that manages Christina's appointments, books handymen, and takes care of her children as needed.
   - Provide a 24/7 VIP handyman service that is available anytime and aligns with Christina's schedule.
   - Implement a Virtual Reality system allowing Christina to remotely monitor and control handyman tasks without being present.
   - Create a smart home that autonomously detects repairs and coordinates handyman appointments.
   - Deploy a fleet of drone handymen ready on demand to perform minor repairs autonomously.
2. **In an Ideal World:**
   - Develop a universal calendar that syncs Christina's schedule with handymen to automatically find suitable appointment times.
   - Create an app displaying available handymen in real-time, with options to book and adjust appointments instantly.
   - Offer a teleportation service for handymen, enabling immediate onsite presence without travel time.
   - Introduce an automated home repair system that fixes minor issues independently and calls handymen for major tasks.
   - Utilize an AI-based conflict resolution service that automatically proposes alternative appointments and solutions when changes occur.

3. **With a €100 Budget and One Month to Implement**:
   - Set up a simple online booking system listing local handymen and their availability for quick appointment scheduling.
   - Start a WhatsApp group with local handymen who post their availability and allow direct bookings.
   - Provide a printed weekly planner for Christina with specific sections for handyman appointments to avoid overlaps.
   - Organize a basic repair course for Christina's children, enabling them to perform simple tasks and relieve their mother.
   - Establish a cooperative system with neighbors where multiple households coordinate handyman appointments more efficiently.

4. **Unconventional Methods to Solve the Problem**:
   - Organize a handyman flash mob: a group of handymen arrives at a set time and completes all pending tasks simultaneously.
   - Create a barter system where Christina offers her own skills or services in exchange for handyman work.
   - Develop a handyman reality TV format where handymen compete for the fastest and most efficient repair while accommodating schedules.
   - Introduce a "handyman holiday package" where handymen perform all work when Christina is on vacation.
   - Experiment with "handyman roulette," where Christina randomly selects a handyman from a list of available professionals, speeding up the selection process.

5. **Methods for Solving the Problem in the Year 2100**:
   - Implement an AI-driven home management system that anticipates maintenance needs and automatically coordinates appointments with handymen synced to Christina's digital calendar.
   - Utilize nanotechnology repair bots that autonomously perform minor repairs without the need for handymen.
   - Launch a Hologram Handyman Service, where remote experts provide instructions while robots conduct the physical work.
   - Develop genetically modified "Super Handymen" capable of multitasking and adapting flexibly to schedule changes.
   - Provide a Quantum Teleportation service for handymen, allowing instant appearance at any location without time loss. ↓

5. Accelerating Prototyping with Rapid Visualization

For *"Accelerating Prototyping with Rapid Visualization"* consider the multimodality of modern tools enabling diverse forms of prototype creation. These tools can transform textual descriptions into various visual outputs like images, videos, or wireframes, broadening the scope of how concepts are visualized. Additionally, they can convert existing images into detailed videos or interactive models, offering new perspectives on the initial designs. This variety allows teams to explore multiple representation forms swiftly, ensuring that ideas are not only quickly brought to life but also examined from different angles to enhance understanding and decision-making in the design process.

Drawing real-time canvas and AI-generated images by krea.ai (screenshot from video by @AIxCreative)
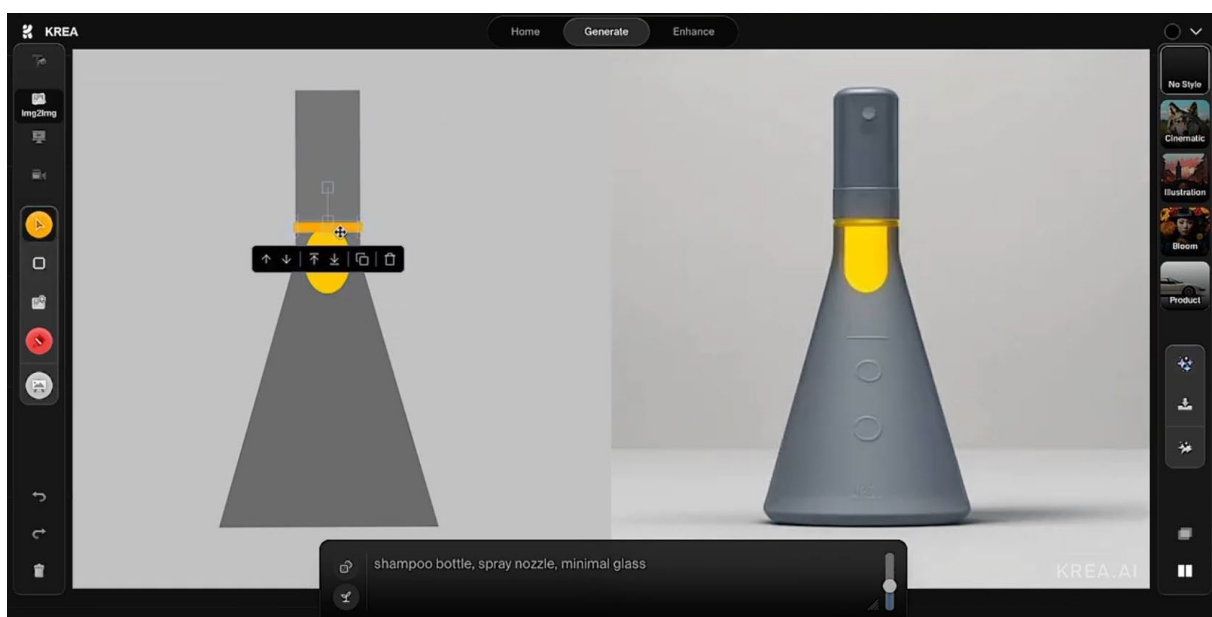
Fine-tuned and modified versions with Midjourney (screenshot from video by @AIxCreative)
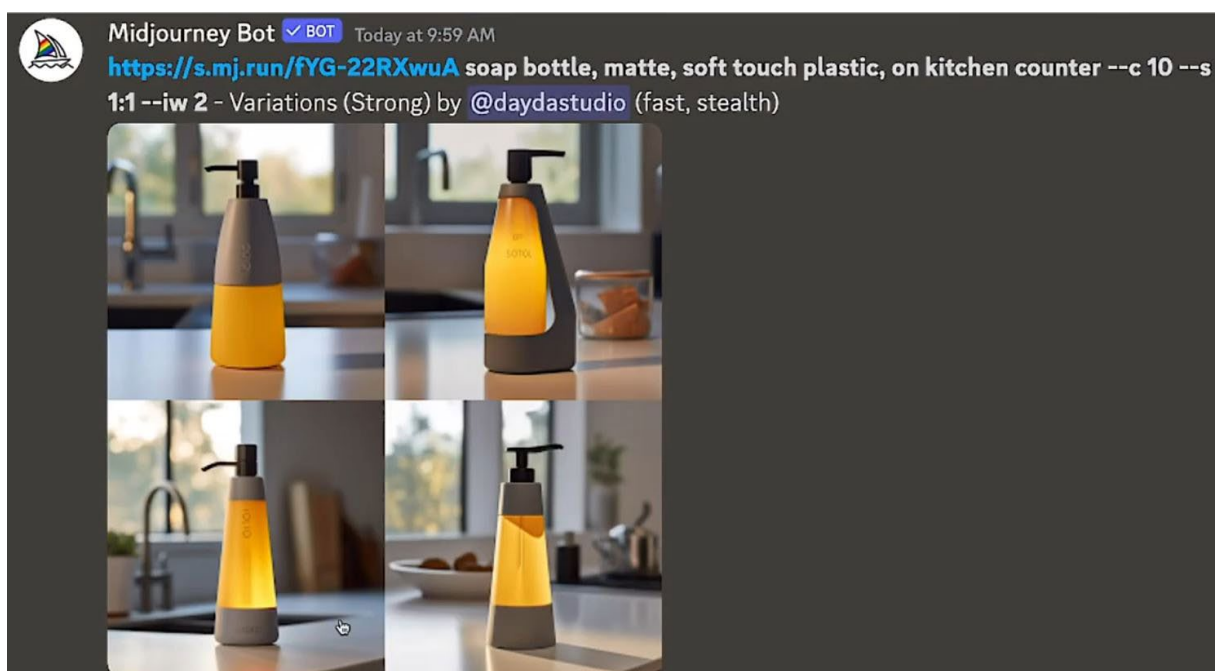
Input text to wireframe with Uizard

Use simple text to generate your project using Uizard's AI-powered Autodesigner

Which device are you designing for?

Mobile | Tablet | Web

Describe your project in plain English — Try example

An interactive app that provides step-by-step instructions, videos, and tips for various DIY projects. It could also include troubleshooting features, a community feature for sharing tips and tricks, and the ability to order materials and tools.

245/300

Describe a design style, pick keywords, or both

Modern startup style like airbnb

32/150
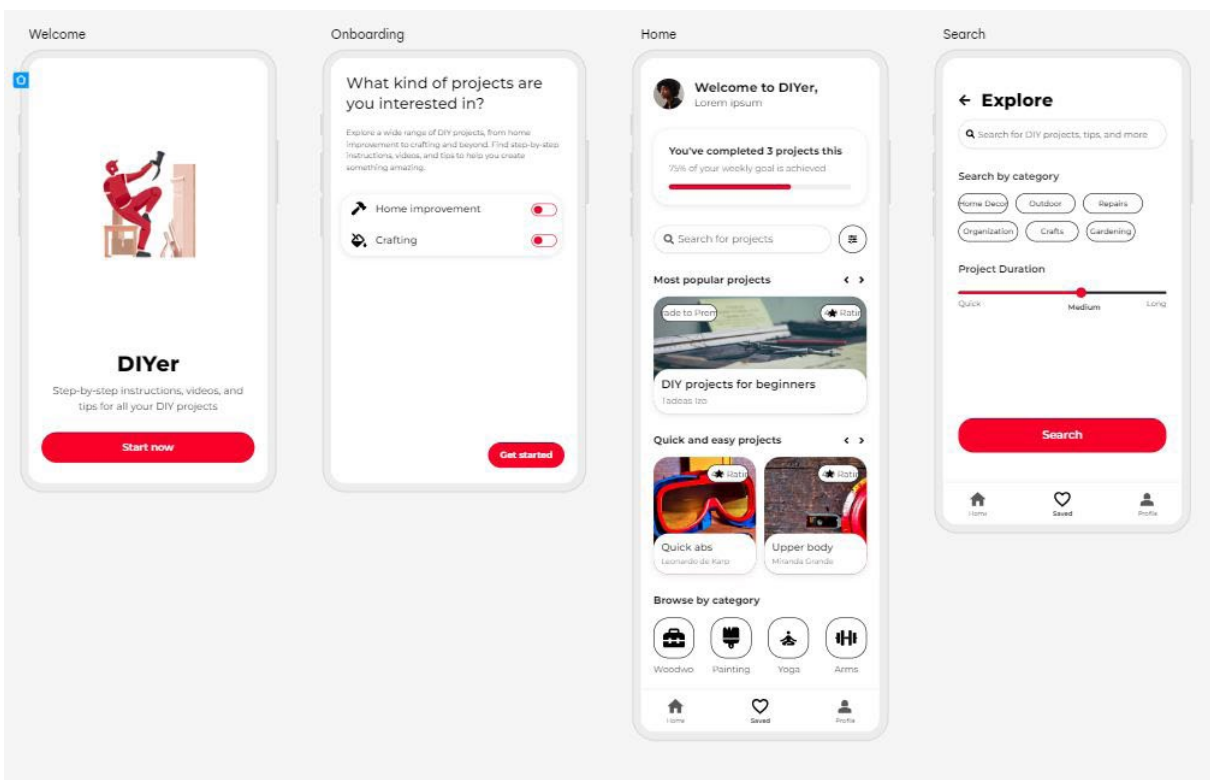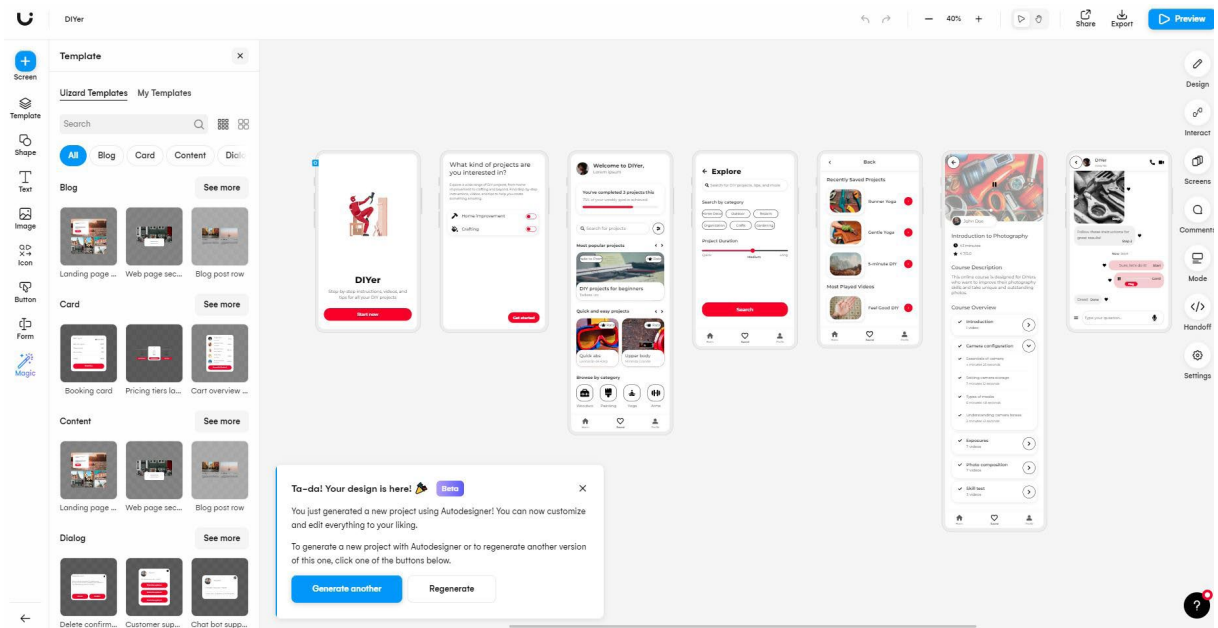
Light Dark Modern Artsy Techy Young
Corporate Formal Elegant Hand-drawn

Generate my project Beta

Output wireframes (Uizard)

Creating a future scenario for a real place with Midjourney (D-School project team „6Peaks",
summer term 2023)

6. Refining Solutions with Data-Driven Feedback Loops

For *"Refining Solutions with Data-Driven Feedback Loops"* imagine utilizing Sinus Milieus research data (or any other) to create detailed personas, which then further inform the testing and feedback process for a new product or service concept. By constructing personas based on comprehensive lifestyle and attitude data, teams can deepen their understanding of different user segments. Incorporating this data-driven approach allows for more targeted testing, yielding richer feedback that can be directly applied to refine the solution. Additionally, translating this feedback into role-play instructions can offer a unique method to bring empathy back into the process, enabling team members to immerse themselves in diverse perspectives and enhance the solution's alignment with user needs and experiences.

Instructions and comprised data input

SA **Sie**

Act as an expert in user research and feedback. I will give you a description of a target group taken from the Sinus Milieus. Based on this description, please do the following:

Create a Suitable Persona for the Milieu to Test the Idea: Craft a persona fitting for the milieu to test a mobile workout app (description see below). Describe this persona in a way that serves as a "character briefing" for a team member, enabling them to portray the persona in a role-play.

Empathize with the Persona and Conduct a User Test with the Idea: Immerse yourself in the persona and conduct a user test with the app based on the role-play scenario you proposed. Summarize the most relevant feedback in a way that a team member can simulate a real test and accordingly provide feedback. Be specific in the following areas:

What the persona likes.
What she criticizes/what doesn't work.
Suggestions for improvement.
New ideas.
Other thoughts, including regarding needs and problems.
Provide Instructions for Playing the Persona: Offer some instructions for playing the persona, ensuring that the team member does not fall victim to bias tendencies.

Output ChatGPT: Persona, Feedback & Roleplay instructions

⑤ ChatGPT

Create a Suitable Persona for the Milieu to Test the Idea:

Name: Alex Mercer

Age: 32

Profession: Tech Entrepreneur

Background: As Alex Mercer, you are a tech-savvy individual who thrives on efficiency and innovation. Your day is scheduled down to the minute, balancing your role as the CEO of a startup with personal health and wellness. You're constantly on the lookout for tools and solutions that streamline your routines, enhancing productivity and personal growth. You hold a strong belief in self-responsibility and have a progressive outlook on life. You're also a trendsetter, often one of the first among your peers to adopt new technologies and styles. Your fitness routine is important to you, but it needs to fit seamlessly into your busy lifestyle.

Empathize with the Persona and Conduct a User Test with the Idea:

As Alex Mercer, testing this mobile workout app, here's the feedback you might offer:

Likes:

- You appreciate the app's sleek design and user-friendly interface, aligning with your preference for high-quality, stylish products.
- The customization based on physical ability and the real-time adjustments resonate with your desire for efficiency and personalization.
- You value the integration of environmental factors like weather or air quality into the workout plan, reflecting your forward-thinking and comprehensive approach to fitness and health.

Criticizes/What doesn't work:

- You find some of the app's recommendations too generic; you expect cutting-edge, tailored solutions.
- The app might not integrate well with your other personal health devices or apps, creating a disjointed experience.
- You could experience frustration if the app's feedback system is slow or if the adjustments aren't as dynamic and quick as your fast-paced lifestyle demands.

↓

Suggestions for improvement:

- Enhance personalization features, perhaps by integrating machine learning algorithms that adapt more quickly to your fitness progress and personal preferences.
- Improve interoperability with other health and fitness platforms you use, ensuring seamless data exchange and a unified health management experience.
- Speed up the app's response time and ensure real-time feedback and adjustments are as instantaneous as possible.

New ideas:

- Introduce a feature for setting and tracking long-term fitness goals, with milestones and rewards to keep users motivated.
- Offer a virtual personal trainer option for live feedback during workouts, appealing to your desire for personalized and direct guidance.

Other thoughts:

- The app could better align with your busy schedule by offering shorter, more intense workout options tailored to your calendar.
- Consider environmental sustainability as ↓ ts, which align with your global-economic thinking and societal responsibility values.

Provide Instructions for Playing the Persona:

When role-playing as Alex Mercer, keep in mind the following:

1. **Embody the Efficiency:** Alex is all about optimization and efficiency. Make sure every interaction with the app reflects a desire for streamlined, effective solutions.
2. **Adopt the Elite Mindset:** As part of the progress-optimistic elite, Alex expects the best and is forward-thinking. Critique the app from a high-standard and innovative perspective.
3. **Balance Professionalism with Wellness:** Alex is a professional who does not compromise on personal health and fitness. The app must integrate seamlessly into a busy lifestyle without being intrusive.
4. **Avoid Bias:** Be careful not to let personal dislikes or preferences influence the feedback. Stay true to Alex's character: a tech-savvy, progressive individual who values personal responsibility and style.
5. **Be Specific:** When providing feedback, be specific about what works and what doesn't. Alex is detail-oriented and would give clear, constructive criticism.

By keeping these points in mind, you will be able to accurately portray Alex Mercer and provide useful, targeted feedback on the mobile workout app from the perspective of someone within the Performers' Sinus Milieu.

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6. References & Further Reading

This whitepaper draws upon the authors' direct experiences and insights gained from experimenting with AI and Design Thinking in the development and execution of a novel workshop format, "AI & Design Thinking - The Creative Alliance." Additionally, the content is enriched by feedback and discussions from various keynotes on this topic, as well as by a review of relevant articles and research papers in the field, see below.

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7. About the Author

Samuel Tschepe has a background in education and lifelong learning and has been working at HPI d-school in different roles since 2012. Today, he is leading the HPI Certification Program for Design Thinking Coaches. He has 365+ days of DT coaching experience from diverse (international) contexts. Furthermore, he also draws from his experience in improvisation theatre, sport and music to inspire his work. Since quite some time now, his particular field of interest has been exploring the synergy between Artificial Intelligence and Design Thinking.

d—school