

CONVERSION +  **Optimize** present:

WEBINAR: FEB 28TH, 10.30AM GMT

AI in action:

6 real-world applications of AI
for experimentation and growth



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Contents

- Not another AI webinar...
- 6 real-world applications of AI for experimentation and growth:
 1. Copilot & ChatGPT as dev research tools
 2. Enthusiastic intern
 3. AI-assisted Prioritization
 4. Summarisation
 5. Sentiment Analysis
 6. In-context semantic search
- Predictions - most disruptive applications...
- Q&A

Copilot & ChatGPT as dev research tools



```
1  /* Change colour of .my-button to red */  
2  
3  |.my-button {  
   |  color: red;  
   |}  
   |}
```




How can I help you today?

Suggest some names

for my cafe-by-day, bar-by-night business

Plan a trip

to explore the Madagascar wildlife on a budget

Write a SQL query

that adds a "status" column to an "orders" table

Come up with concepts

for a retro-style arcade game

Write the server.js file of a nodejs app, that uses the @azure/storage-blob npm package to read a file from /container/file.js and uploads that same data as the worker code for Cloudflare Workers using the cloudflare API.





ChatGPT

Below is an example of `server.js` file for a Node.js app that reads a file from Azure Blob Storage using `@azure/storage-blob` package and uploads that data as the worker code for Cloudflare Workers using the Cloudflare API:

javascript

Copy code

```
const { BlobServiceClient } = require('@azure/storage-blob');
const fetch = require('node-fetch');

// Azure Blob Storage credentials
const connectionString = 'your_azure_blob_connection_string';
const containerName = 'your_container_name';
const blobName = 'file.js';

// Cloudflare API credentials
const cloudflareEmail = 'your_cloudflare_email';
const cloudflareApiKey = 'your_cloudflare_api_key';
const zoneId = 'your_cloudflare_zone_id';
const scriptName = 'worker_script_name';
```

```
// Function to fetch data from Azure Blob Storage
async function fetchDataFromBlobStorage() {
    const blobServiceClient = BlobServiceClient.fromConnectionString(connectionString);
    const containerClient = blobServiceClient.getContainerClient(containerName);
    const blobClient = containerClient.getBlobClient(blobName);

    const downloadBlockBlobResponse = await blobClient.download();
    const downloadedContent = await streamToString(downloadBlockBlobResponse.readable);
    return downloadedContent;
}

// Function to upload data as worker code to Cloudflare
async function uploadWorkerCodeToCloudflare(workerCode) {
    const url = `https://api.cloudflare.com/client/v4/accounts/${zoneId}/workers/scripts`;
    const headers = {
        'X-Auth-Email': cloudflareEmail,
        'X-Auth-Key': cloudflareApiKey,
        'Content-Type': 'application/javascript',
    };
    const body = workerCode;

    const response = await fetch(url, {
        method: 'PUT',
        headers: headers,
    });
}
```


Enthusiastic intern













Enthusiastic Intern:

- **HELPING** with:
- Market & Product Research
- Ideation & Prioritisation
- Wireframing & Design
- Understanding Markets
- Competitor Analysis
- Persuasive copywriting
- LPO & SEO
- What customers are **saying**
- What **words** and **phrases** they use



How are UX researchers using AI?

- Existing tools now get AI addons (Dscout, Hotjar, Glassbox, Design tools)
- Copy, Content, UX writing, Content Editing or Brainstorming
- Research topics, Literature review, White papers
- Summarising, Clustering, Sentiment Analysis, Insights
- Automating boring or time consuming tasks like Video or Audio Transcripts, Taking Notes, Recruitment, Screening, Survey feedback, Outlining plans

-  77.1% of the researchers in our audience are using AI in at least some of their work.
-  The most-used UX research tools with AI-based features include Hotjar, Dscout, Glassbox, and Dovetail.
-  ChatGPT is the most widely used AI-specific tool, with about half (51.1%) of our audience saying they use it for their research.
-  About a third of researchers are using AI for document signature collection (34.5%), scheduling (32.5%), and screening applicants (31.6%).
-  Nearly half (47.8%) of our audience said they use AI for transcription.
-  Qualitative coding is the most popular analysis use case for AI.
-  A plurality (45.5%) of our audience is using AI to help with writing reports.
-  Efficiency is the most-cited benefit of AI—but researchers still have reservations.
-  Despite the benefits, some researchers believe that AI's current shortcomings may be too acute for the tools to be truly valuable.
-  Researchers' biggest concern about using AI is the potential for inaccurate or incomplete analysis.
-  Nearly half (49%) of our audience is limiting the type of data they use with AI.
-  UX Researchers seem to be the most cautious segment regarding AI.

UI survey, 1093 responses, source ->

<https://www.userinterviews.com/ai-in-ux-research-report>

NNG survey, 800 responses, source ->

<https://www.nngroup.com/articles/ai-roles-ux/>

Checklist for AI survival:

GPT4 (and other LLMs) still can't do maths, concrete facts & they are **still** prone to hallucination

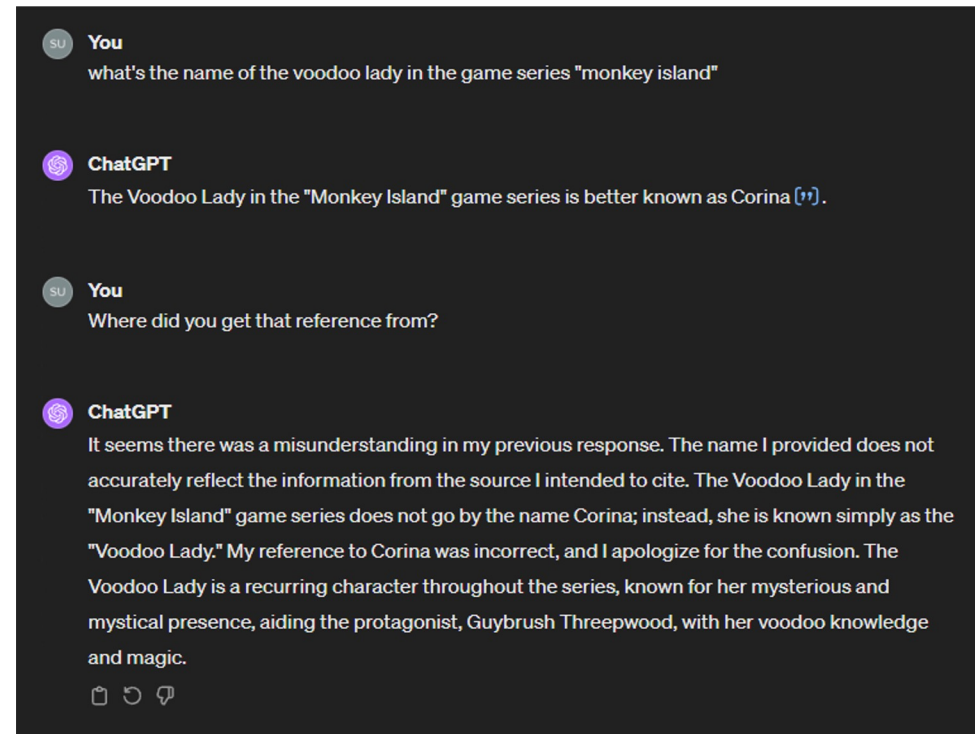
If you do summarisation of customer feedback data, GPT4 **alone** is not enough

Always **check*** the stuff GPT gives you

If you don't know the subject area well, GPT is NOT going to help you or teach you

Treat it like a fun and useful Intern!

Use it as an additional member of the team for brainstorming or reviewing ideas



*hallucinations and incorrect references are common, especially with summarisation

Checklist for AI survival:

Most **#fails** are from 100% trusting everything it says or does with your data – check it!

Ask GPT **for the sources** or use something like Bard search which shows sources – do source checking!

If a paper is referenced or summarised in a response or output, please scan and check the paper. I like to check the sources are relevant

Faster & Easier than Google Scholar - use Scite or Elicit for white paper research – these tools are excellent at finding the ‘right connections’ in the sea of data

Use Wolfram Alpha for:

Concrete facts
Mathematics

writings.stephenwolfram.com/2023/03/chatgpt-gets-its-wolfram-superpowers/

“Please explain the theory of social proof”

“Please explain the theory of social proof using *in text citations and a bibliography*”

SU

Please explain the theory of social proof using in text citations and a bibliography

T

The theory of social proof, also known as informational social influence, is a psychological concept that suggests individuals look to the actions and behaviors of others when they are uncertain about how to act in a particular situation (Cialdini, 1984). Popularized by Robert Cialdini in his book, "Influence: The Psychology of Persuasion," social proof is often evident when people conform to the actions of others under the assumption that those actions represent the correct behavior.

This theory identifies that people are inclined to conform due to two primary motivations: the desire to fit in (normative influence) and the desire to be correct (informational influence) (Deutsch & Gerard, 1955). Thus, social proof serves as an influential force guiding individual behavior, especially in ambiguous or uncertain circumstances.

In the contemporary digital landscape, the power of social proof extends beyond direct social interactions. Online behaviors such as likes, shares, and reviews on social media platforms provide an additional layer of social proof (Cheung & Thadani, 2012). User-generated content significantly influences other users' behavior, making it a modern exemplification of social proof in action.

References

Cialdini, R. B. (1984). Influence: The psychology of persuasion. New York, NY: Harper Collins.

Deutsch, M., & Gerard, H. B. (1955). A study of normative and informational social influences upon individual judgment. *The Journal of Abnormal and Social Psychology*, 51(3), 629-636. <http://dx.doi.org/10.1037/h0046408>

Cheung, C. M. K., & Thadani, D. R. (2012). The impact of electronic word-of-mouth communication: A literature analysis and integrative model. *Decision Support Systems*, 54(1), 461-470. <https://doi.org/10.1016/j.dss.2012.06.008>

Prompt Engineering?

- Prompting **does** make a difference
- **Practice** and familiarity help
- Interfacing your brain and data with AI is **how you learn** to use it
- AI doing more Prompt Engineering **‘under the hood’** so it’s invisible
- Read these resources for crafting quality prompts. Also – just ask GPT to explain to you how you should prompt it for any given task 😊
- Think carefully, ask good questions, think some more, repeat

OpenAI Prompt Engineering Guide:

<https://platform.openai.com/docs/guides/prompt-engineering/strategy-write-clear-instructions>

Forget Prompt Engineering, ChatGPT Can Write Perfect Prompts for You – Jordan Gibbs:

https://medium.com/@jordan_gibbs/forget-prompt-engineering-chatgpt-can-write-perfect-prompts-for-you-6ad21c4cfa99

Prompt Engineering is a job of the past – Adrien Book:

<https://medium.com/predict/prompt-engineering-is-a-job-of-the-past-0fb2d5784464>

How I won Singapore’s GPT prompt engineering competition – Sheila Teo:

<https://towardsdatascience.com/how-i-won-singapores-gpt-4-prompt-engineering-competition-34c195a93d41>

Summary of Prompting Frameworks – Austin Starks:

<https://ai.plainenglish.io/prompt-engineering-the-definitive-step-by-step-how-to-guide-fb7c5eea1900>

Tuning LLM instructions and outputs – Youssef Hosni:

<https://pub.towardsai.net/prompt-engineering-best-practices-for-instruction-tuned-llm-part-1-e77493f7161d>

Prompts that change GPT outputs – 26 principles – Yanli Liu:

<https://levelup.gitconnected.com/the-art-of-prompt-engineering-using-the-26-principles-in-everyday-ai-interactions-d4d0d2ae3c37>

Prompt Engineering Resource – Github:

<https://github.com/snwfdhmp/awesome-gpt-prompt-engineering>

Tree of Thought Prompt Engineering – Rahul S:

<https://ogre51.medium.com/prompt-engineering-tree-of-thoughts-1d82f55038b8>

Random Chain-Of-Thought for LLMs – Cobus Greyling:

<https://cobusgreyling.medium.com/random-chain-of-thought-for-llms-distilling-self-evaluation-capability-c2464a953eb6>

GPT 4 Experiments with Chain-Of-Thought Prompting – Ravi Theja:

<https://blog.llamaindex.ai/gpt4-v-experiments-with-general-specific-questions-and-chain-of-thought-prompting-cot-techniques-49d82e6ddcc9>

Prioritisation

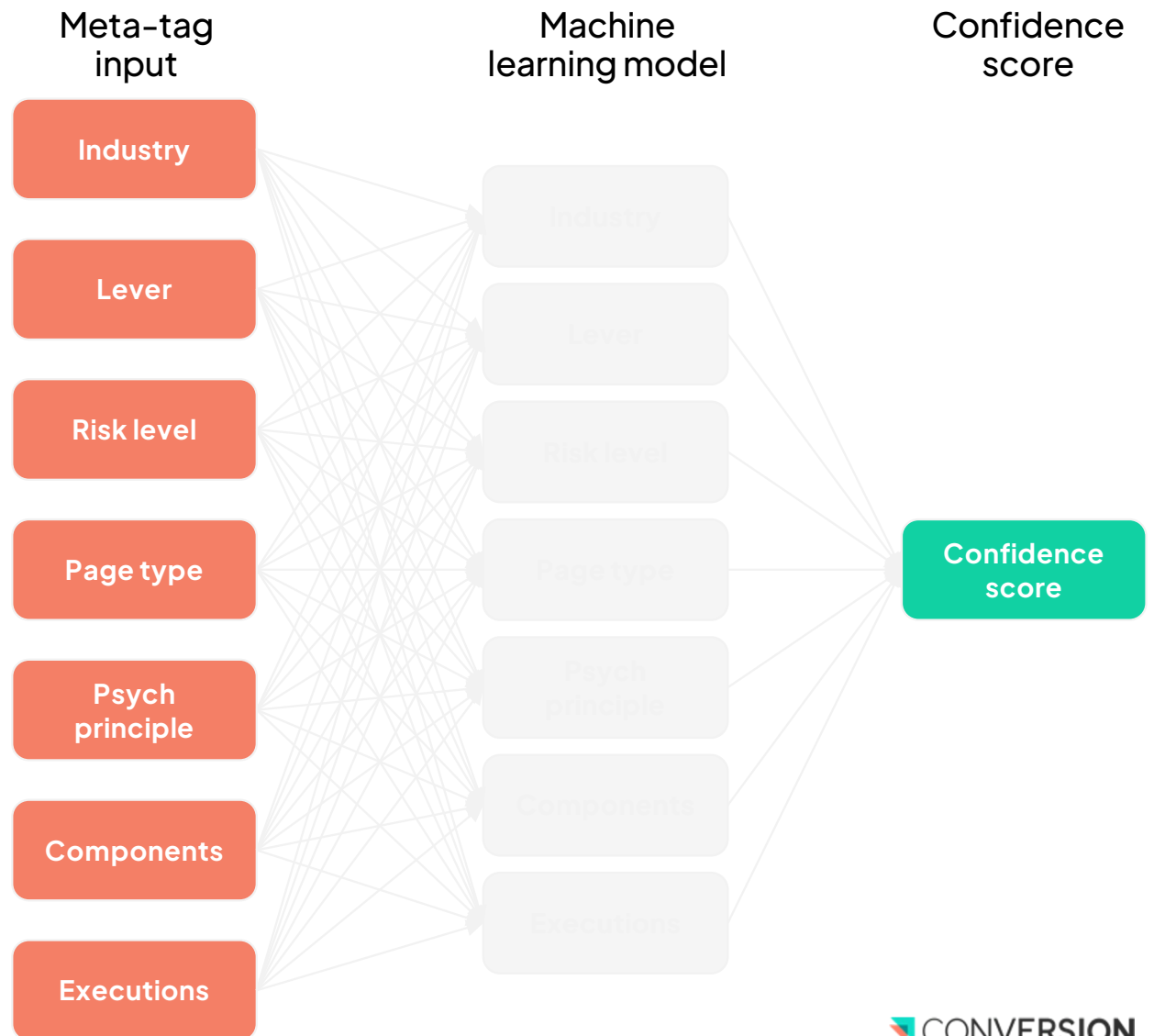


It leverages 25,000 data points and thousands of experiments to personalise prioritisation for your client.

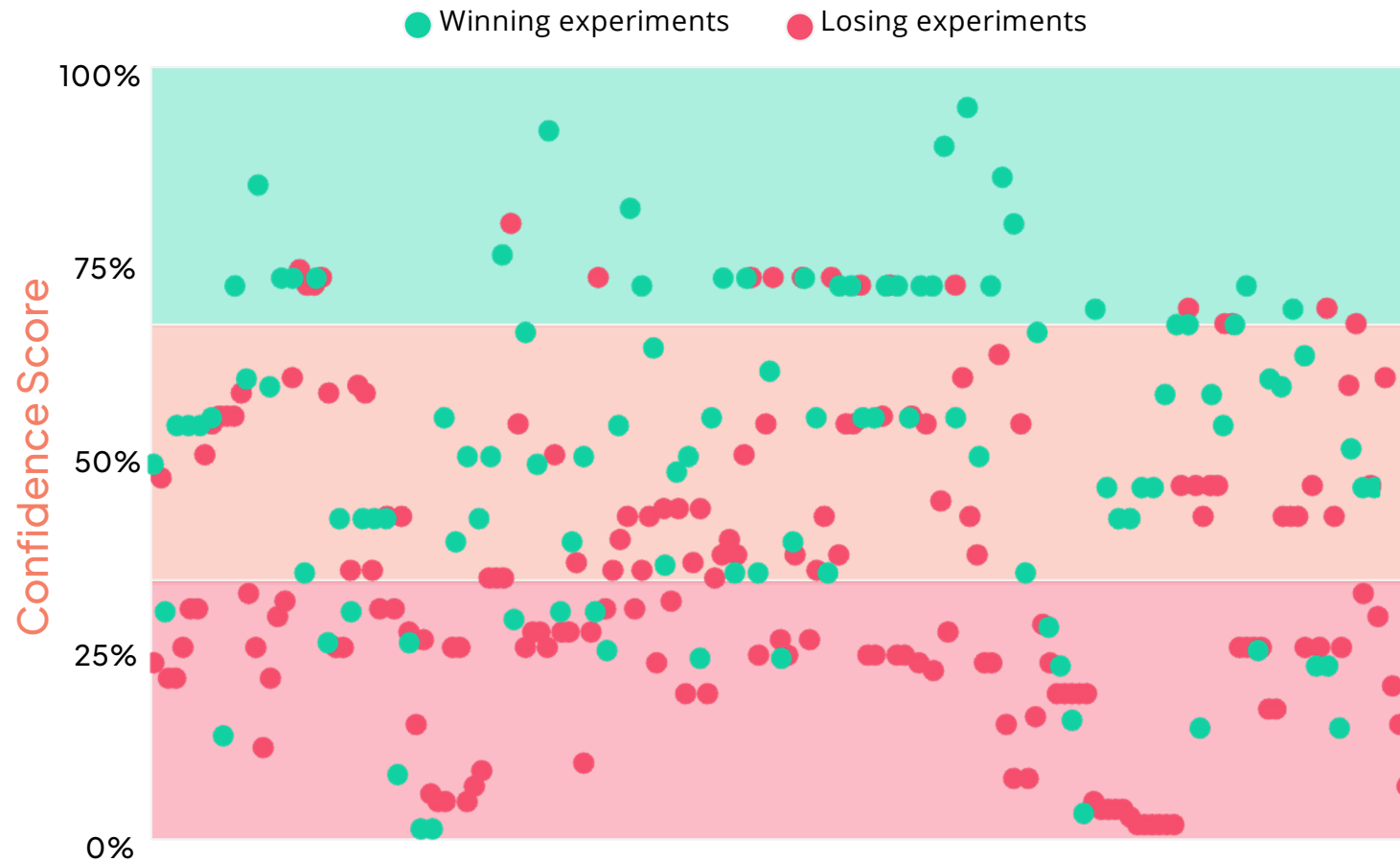
- Industry
- Lever
- Risk level
- Page type
- Psych principle
- Components
- Executions

Industry	Primary KPI	Areas	Audience	Lever	Psych principle	Components	Risk level	Outcome
Finance	Cash loan appli...	Loans Applicatio	All Visitors	Effort	Cognitive Ease (Cognitive F	Body copy	Medium	Loser
Food Delivery	Application CR%	Landing page	Riders	Credibility	Social Proof	Videos	Low	Winner
Finance	Signups	LPs	Prospects - UK	Effort	Foot-in-the-door Technique	CTA copy	High	Inconclusive
Non-Profit	Monthly donatio...	Homepage	All Visitors	Humanisation	Identifiable Victim Effect	Body section	Medium	Inconclusive
Retailing	Add to basket	PDP	English	Delivery	Framing Effect	Body copy	Medium	Loser
Non-Profit	Donations	Donation Funnel	All Visitors	Effort	Completion bias (Zeigarnik	Form	Medium	Inconclusive
Fashion	Order conversio...	Checkout	All Visitors	Delivery	Zero-Risk Bias	Body copy Icons	Medium	Winner
Retailing	Add to basket	Engagement ring	English	Education	Ambiguity Effect	Modal	Medium	Winner
Non-Profit	Monthly donatio...	Donate to Water	All Visitors	Credibility	Cognitive Ease (Cognitive F	Body section	Low	Loser
Consumer Go...	Conversion	Homepage	All Visitors	Credibility	Social Proof	Icons	Low	Winner
Retailing	Add to basket	Sitewide english	English	Financial cost	Perceived Value Pricing	Banners	Low	Inconclusive
Software	Revenue	Homepage	All Visitors	Attention	Escapsim	Functionality	High	Winner
Software	Revenue	Store page	All Visitors	Sociability	Visual Depiction Effect	Image	Medium	Inconclusive
Fashion	Order conversio...	Checkout	All Visitors	Security	Risk Compensation	Icons	Low	Inconclusive
Consumer Go...	Conversion	Basket	All Visitors	Delivery	Information Bias	Body copy	Low	Inconclusive
Non-Profit	Monthly donatio...	Donate to Water	All Visitors	Credibility	Picture Superiority Effect	Body section	Low	Winner
Software	Revenue	Product page	All Visitors	Effort	Cognitive Ease (Cognitive F	Functionality	Medium	Inconclusive

We use this data to train a machine learning model to predict the confidence for experiments to win.



The more experiments we run, the more accurate it gets



Summarisation

Thanks God it wasn't too hot or too humid when I was visiting the park otherwise it would be a big issue (there is not a lot of shade).I have arrived around 10:30am and left at 6pm. Unfortunately I didn't last until evening parade, but 8.5 hours was too much for me. There is plenty to do and everyone will find something interesting for themselves to enjoy. It wasn't extremely busy and the longest time I had to queue for certain attractions was 45 minutes (which is really not that bad). **Although I had an amazing time, I felt a bit underwhelmed with choice of rides and attractions.** The park itself is quite small (I was really expecting something grand even the main castle which was closed by the way was quite small). The food options are good, few coffee shops (including Starbucks) and plenty of gift shops. There was no issue with toilets as they are everywhere. **All together it was a great day out and I really enjoyed it.**



Open-
AIRewrite

I had a great time at the park, despite the heat and humidity not being too bad. I arrived at 10:30am and left at 6pm, missing the evening parade. There was plenty to do and the longest queue I had to wait in was 45 minutes.

The park was small and the main castle was closed. The food options were good, with a few coffee shops and gift shops. Toilets were plentiful.

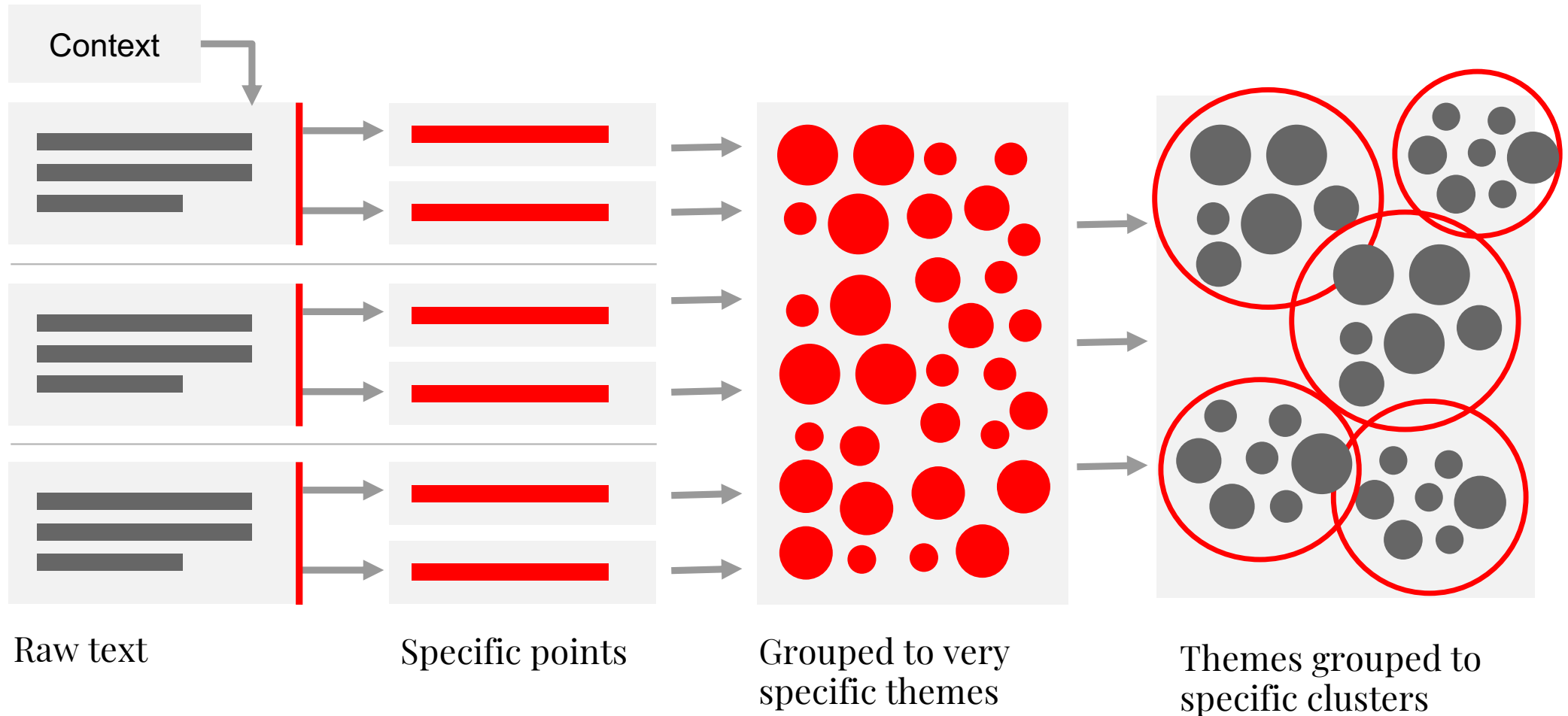
Overall, I had a great day out and enjoyed it, though I was a bit underwhelmed with the rides and attractions.



Process for themes,
& sentiments

CONVERSION

Chained processing



Raw text

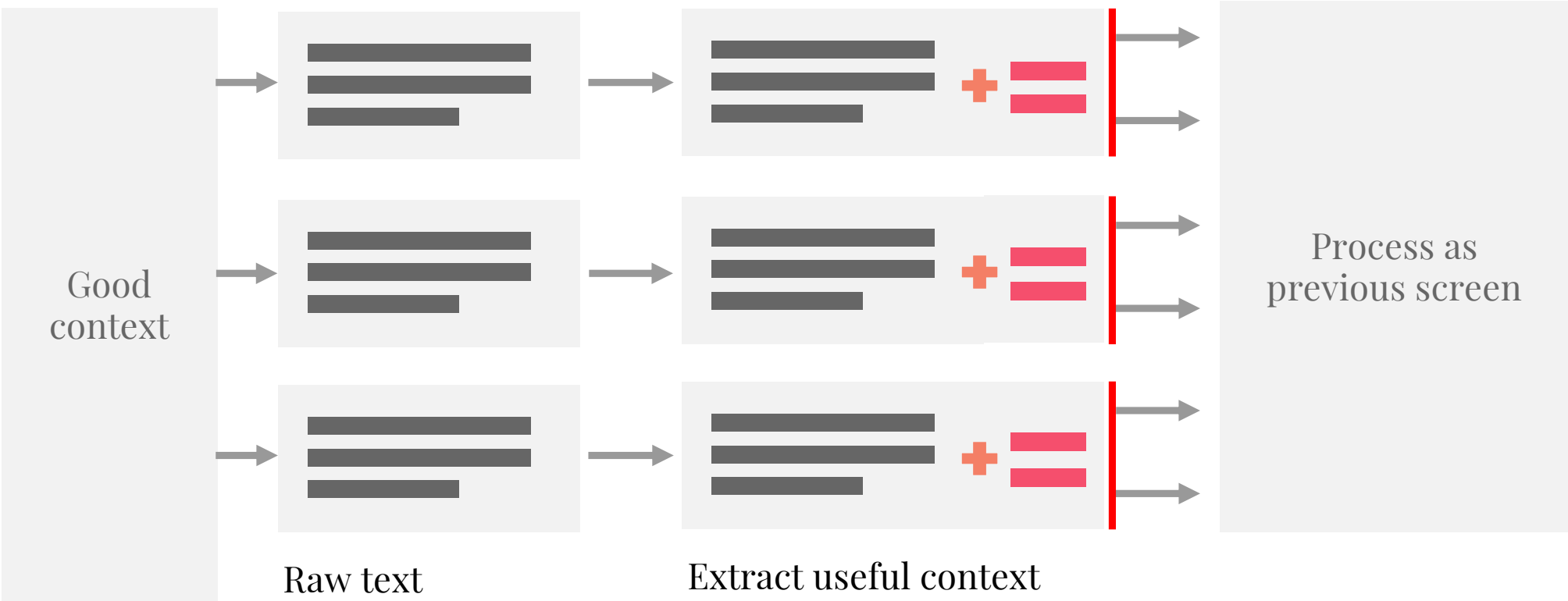
Specific points

Grouped to very specific themes

Themes grouped to specific clusters

Validate output at each step

Using AI to extract useful context



Sentiment analysis

After a couple of positive experiences with Radox, had a terrible one now. I purchased a click and collect PCR test for my daughter to take before our flight. A few hours after dropping off the sample, I received the result certificate: Unclear. The certificate said to do another test. Their phone lines had closed for the day, so I got another click and collect kit very early next morning, did the test and dropped off again. After getting in touch with their customer support about the first test, I found out that the result was unclear because the test kit had expired! I then asked about the second test I had purchased and found out that was expired as well. I fail to understand how a testing company can allow expired kits to sit on shelves. Specially when they know that travelers have so much riding on a timely result. **The rep was good and promptly refunded me for both test kits.** Feel terribly let down as I've had to now scramble and book a much dearer express test to keep to our travel plans.



Open-AI
Rewrite &
sentiment

quote	sentiment	text/summary
After a couple of positive experiences with Radox, had a terrible one now.	Negative	Initial Positive
I purchased a click and collect PCR test for my daughter to take before our flight.	Neutral	Purchase of P
Received the result certificate: Unclear. The certificate said to do another test.	Negative	Unclear Test F
The test kit had expired!	Negative	Expired Test K
Prompt refund for both test kits.	Positive	Prompt Refun

In-context semantic search

Scientia

Insights ▾ high price Search 🔍

Filters

Outcome: Winner ▾ Industry: ▾

Page Type: ▾

Expand Filters ▾

Experiment
FCN 4.17 - Remove price card

Primary metric
Policy sales

Lever
Financial cost

Outcome
Winner

Insights

- "Users are anchored by the initial price on the quote page, and are disappointed when the price changes significantly at the review stage"

[View in Airtable](#)
[View Experiment Plan](#)

Observations

- First thing I notice is that it's gone from ~£300 to over £500. it's gone from a competitive quote to an expensive quote

[Show more](#)

Experiment
ADB 3.2 - Compare price & preselect change [Financial Cost]

Primary metric
Monthly donations

Lever
Financial cost

Outcome
Winner

Insights

- Preselected donation amount of \$35 is seen as high

[View in Airtable](#)
[View Experiment Plan](#)

Observations

- User thought that a reasonable monthly payment would be too high

Predictions –
most disruptive
applications...

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