

Assignment 1: Phase 1 + 2 + 3

Kaushal Kulkarni, cohort 49

1

Google AI Mode

User Flows



Discover

Users have been searching on Google for the last 20+ years. They are familiar with the experience and the interface. By introducing AI mode in the primary search surface, Google is focusing on discovery of the feature.



Search

The search behaviour is fundamentally different from a keyword based search, searches being more descriptive



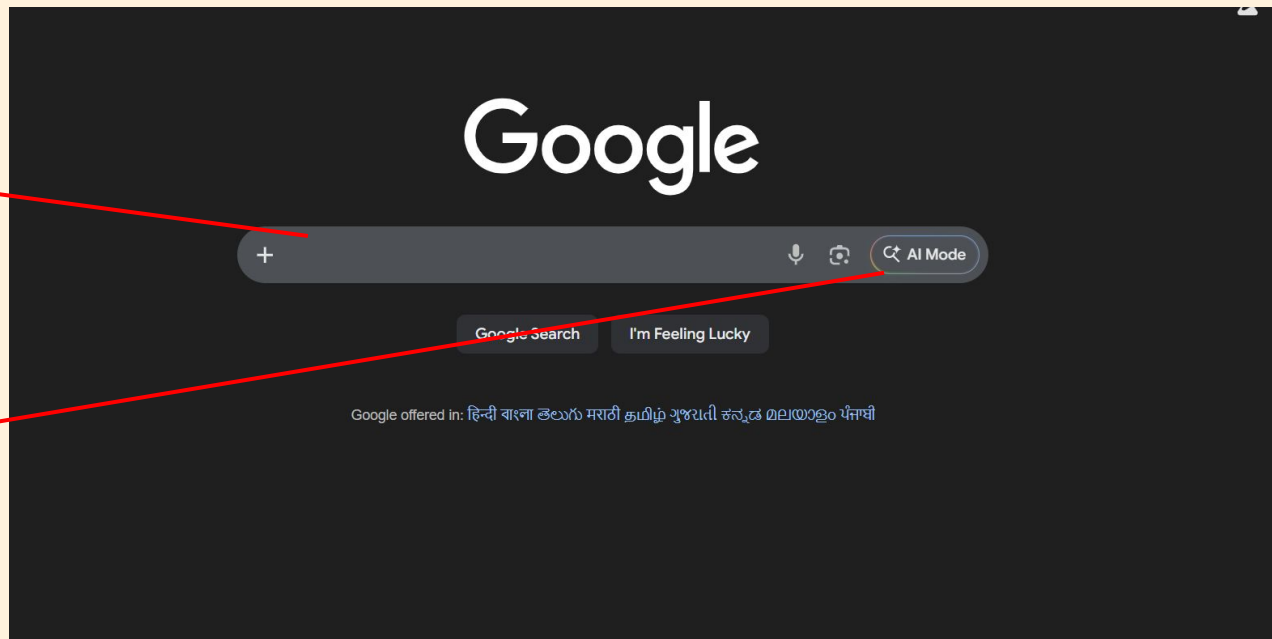
Learn

Old Google Search gives back url, users need to hunt for knowledge in the links. AI Mode extracts relevant information from the links, reasons with it and gives answers to the questions users have, improving ux.

Discovery > Web

I can search my usual way...

Dedicated call out for AI Mode



What works: Directly embedded into the search interface, Hard to miss.

Friction: No dedicated url for the AI mode, If I want to land directly on the page, I need to take two steps > [google.com](https://www.google.com) > AI mode

Discovery > Mobile

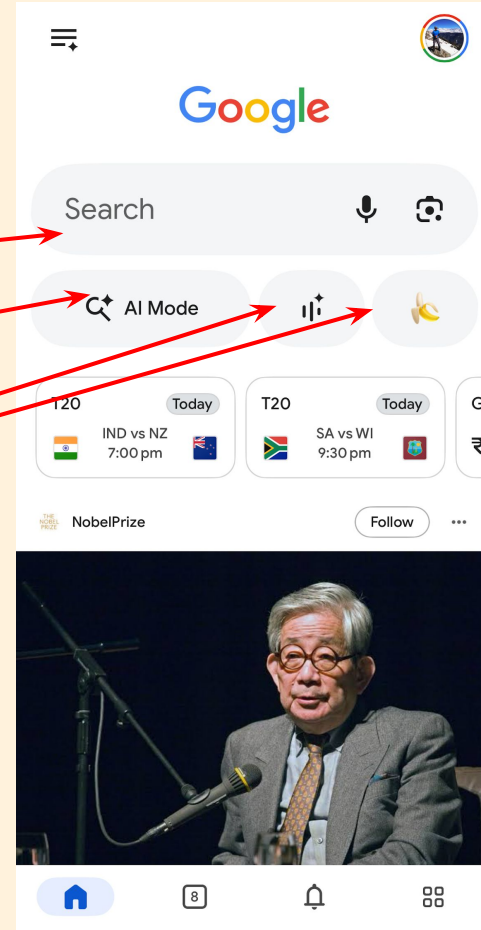
I can search my usual way...

Dedicated call out for AI Mode

Additional options, what could they be?

What works: Allows me to select the relevant mode for search.

Friction: I can't figure out which mode is better for me? How should I search in each mode?

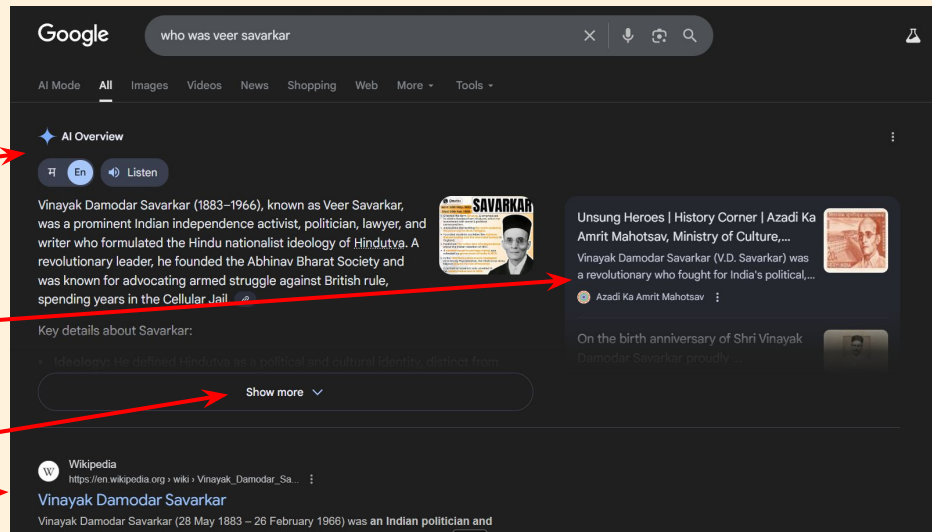


Search > Web > Google.com

AI Summary for quick answers

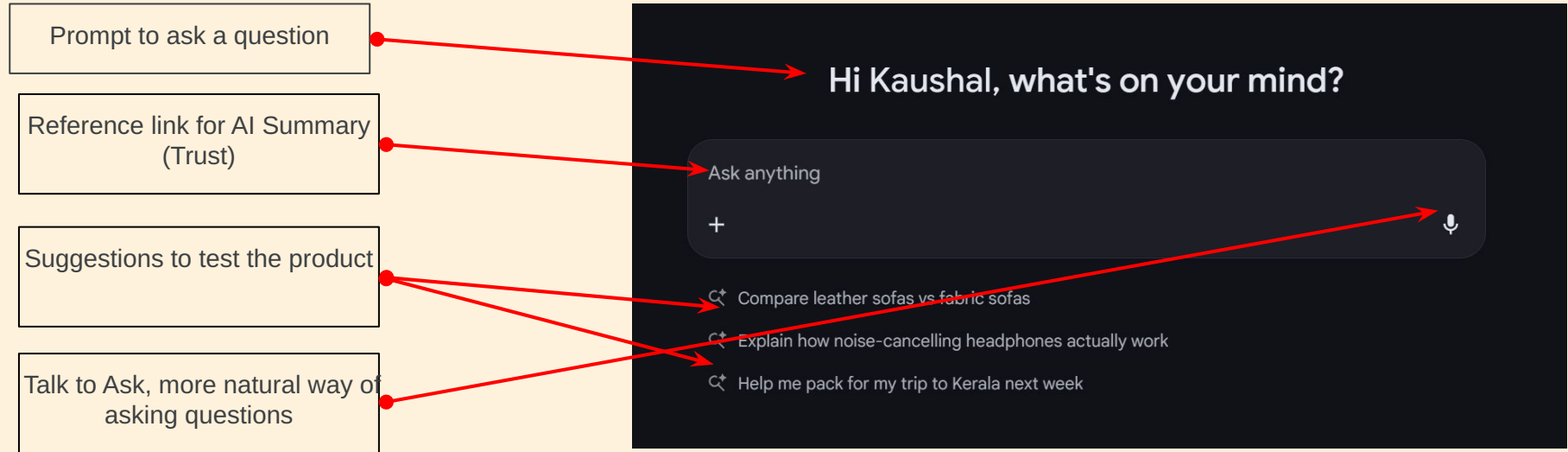
Reference link for AI Summary
(Trust)

Choice to the user: AI Summary
vs standard links...



What works: It is very hard to miss the AI summary. I can ask questions naturally.
Friction: I don't know how to search to get the AI summary

Search > Web > AI Mode



What works: Easy to get started

Friction: Irrelevant search prompts for me.

Learn > AI Mode

Highlight relevant summary

Well formatted response to read and learn

Sources to build trust, and navigate to if interested

Ask follow up questions

Explain how noise-cancelling headphones actually work

Noise-cancelling headphones use two distinct methods to keep the world quiet: **passive isolation** and **active technology**.

1. Passive Noise Cancellation (Physical Blocking)

This is the "old-school" method. It relies on the physical design of the headphones to create a seal around your ear.

- **Materials:** High-density foam, leather, or silicone ear tips.
- **Effect:** It works like putting your fingers in your ears; it physically blocks high-frequency sounds (like a colleague talking or a siren) from reaching your eardrum.

2. Active Noise Cancellation (ANC)

This is where the high-tech "magic" happens. ANC doesn't just block sound; it actively "fights" it using physics.

Ask anything

+

16 sites

How Do Noise-Cancelling Headphones Work? | Sonos Blog
How Do Noise-Cancelling Headphones Work? * Types of noise...
Sonos

What is Noise Cancellation and what can I expect? - Sony UK
4 Oct 2023 — Air trapped between your audio device and eardrum....
Sony UK

How Does Noise Cancelling Work? | LG STORY
15 Apr 2025 — What Is Noise Cancelling? Noise cancellation is a...
LG Electronics

Show all

What works: Well formatted information, and ability to ask follow up questions

Friction: Different response based on the tone of the question, no control on the sources, they can be random or old

Mission	To organize the world's information and make it universally accessible and useful
Revenue Streams	1. Ads (on Google Search) 2. AI Subscriptions (AI + Storage) 3. GCP (APIs, Services)
User Value	Helps me get accurate answers to my questions by saving me the time of going through multiple sources
Business Value	It grows the AI adoption among consumers by making AI models more accessible, increasing stickiness into the Google AI ecosystem, leading to higher AI revenue, and market share
Key Differentiators vs Top-3 Competitors	1. Perplexity: Gives an AI search interface with ChatGPT/Gemini like features with the ability to switch between models a. AI mode is a clutter-free, easy to use user experience for search 2. ChatGPT: State of the Art LLM with a knowledge cutoff, and access to internet a. AI Mode always grounds results in an internet search. ChatGPT does that only when specified, providing stale information 3. Wikipedia: World's largest repository of knowledge a. AI mode answers questions actively, unlike Wikipedia, where a user needs to search for the information manually through the links

Feature	Problem it Solves	How it works	Why it works
1. Snap to ask	I hire the feature to help answer my questions by clicking a photo of the object of my intrigue which I can't describe by text.	I find a lamp that I really like the design of, I click a photo and ask Google for places I can buy the lamp from and the best price. In a foreign land I can't read the information board, I snap a photo and ask Google to translate	<u>For Users:</u> Saves time and effort for the user by replacing words with images for search <u>For Business:</u>Increases retention of users by building a habit of clicking photos to fulfill curiosity

Search



Feature	Problem it Solves	How it works	Why it works
3. Share conversations	I hire the feature to share my learnings with my friends and colleagues, helping me collaborate with them, and allow them to explore further.	I start a thread with Google AI about a topic of my interest, and share a url with a friend once I find something interesting. My friend can share my learning and ask further questions to avoid a cold start	<u>For Users</u> : Get diverse perspective on their discoveries <u>For Business</u> : Improve virality of the product, increasing referral adoption

Search



User Segmentation



Consumers

- AI Aware (Users of AI tools)
- AI Unaware (Don't use AI tools)



Businesses

- Innovators (Adopting AEO)
- Early Adopters (SEO -> AEO)
- Late Movers (Still figuring out SEO)

Primary Segment	Sub-segments	Key Needs/ Use Cases	User Problems
Consumers	Students	> Affordable ways to learn new concepts, > Complete Assignments, and > Experiment with ideas	> Textbook knowledge static with outdated content > Limited guidance on the life decisions > Limited access, most knowledge behind paywalls
Consumers	Working professionals	> Need a reliable source of information in the world of AI slop > Need information quickly > Need ways to translate knowledge into career progression	> AI generated content lacks grounding, it can't be always trusted > AI products require tons of context, which requires time and thought > Fear of missing out on peers going ahead in their career because of AI

Primary Segment	Sub-segments	Key Needs/ Use Cases	User Problems
Consumers	AI Aware: Use AI tools and products in their day to day	> Need a ways to get information with AI they can trust > Need information quickly, without the need to open multiple links for information > Need an assistant to get work done faster	> AI slop leads to reduced trust in the system, need sources > Going through information takes time and effort > Want to get work done faster, and more efficiently to do more work or enjoy life
Consumers	AI-unaware: Haven't used AI tools yet, may have heard about them.	> Need an easy to use and understand platform, not too different from their old ways to search for information > Need the ability to trust AI with their information.	> AI is everywhere but difficult to understand. Difficult to change habits > AI distrust leads to not trying new tools. > Rigid in thinking, and set in their old ways, want familiarity over innovation

Hypothesis 1



We believe AI consumers using AI mode **struggle with trusting** the results because they have **limited control** on the sources AI mode refers to, causing a switch back to the old search experience

P0

Low

Why?

The sources AI mode referred to were limited, and sometimes irrelevant for my search. Depending on the query, if I want explicit about the type of source, AI mode got it right, but that took time and effort

Hypothesis 2



We believe **consumers** struggle to **get started** with AI mode because **framing intent based questions requires unlearning** old habits, leading to **lower adoption, and retention** of AI mode.

P1

Med

Why?

While using AI mode for the first time, I had to think about what how to ask my question, that took time and effort. Further, depending on how I typed my question, I got differing quality of answers.

Hypothesis 3



We believe businesses struggle with users discovering their landing pages, because AI mode moves away from SEO led discovery optimization, leading to lower business overall, and lower Google Ad spend.

P2

High

Why?

AI Mode refers to limited sources which change dynamically depending on the prompt of the user. This makes SEO redundant on which many businesses had built their entire inbound operations.

User Interviews

Selected Persona: Consumer -> AI-Aware

Name	Summary	Unexpected Insights	Actual Workflows	Emotional Moments	Hypothesis Check
Samrat Gaur, 29, Currently working at AXA as an Analyst & pursuing an MBA in parallel. Uses AI tools to complete assignments, research & clear doubts.	Uses different tools depending on the intent of his work. If work requires multiple questions & deep research then prefers ChatGPT, else for simple questions goes to Google. Doesn't trust AI with numbers and research, prefers something like notebooklm with traceable references. Cares about privacy of data, and doesn't explore many tools for searching.	Felt that Google AI mode search will use search to target ads whereas ChatGPT won't. Didn't know AI mode was a separate product, and thought that the summary after a google search is from Gemini. Preference on tool based on intent	For quick questions goes to Google, and the summary is enough, for research goes to ChatGPT or NotebookLM depending the level of confidence he needs in the answer. Verifies important facts with 2-3 tools. For assignments likes to verify links of sources. For learning uses notebooklm to generate quizzes which are grounded in the shared context	ChatGPT being to verbose for simple questions. ChatGPT not providing deep links but homepage links AI answers are usually too positive for no reason	H1 resonated with him, sources are important, given that he needs clear citations. H2 was not relevant, he was very comfortable asking questions to AI. H3 not applicable. We discovered issues around awareness and discoverability of the product.
Aditya Rewari, 39. Software engineer at a tech startup. Uses AI for searching information, and coding agents for work.	Prefers trustworthy information which is difficult in the noise. Uses ChatGPT and Google to search. Depending on the query goes to either tool. For trust prefers videos from reputed people as source of information. Doesn't land on the Google.com page, and uses the url bar to search, hence knew about the summary, but not the AI mode.	Url search bars is the default way of searching. Hasn't landed on the Google.com page is a long time. Uses Cursor for coding at work. Doesn't need to move out of the ide during work.	Depending on the query goes to different tool but relies primarily on ChatGPT, Google, and Youtube. Likes the Google AI Mode Summary, but didn't know about the dedicated AI mode section.	Really dislikes and distrusts the noise of information. While searching about Dhurandar, he felt like the need to double click but didn't use AI mode. Relied on links	H1 resonated in a different setup. H2 wasn't validated. H3 not applicable. Instead

User Interviews

Selected Persona: Consumer -> AI-Aware

Name	Summary	Unexpected Insights	Actual Workflows	Emotional Moments	Hypothesis Check
Anway Pimpalkar, 24 Pursuing his PHD at Harvard in ingestible electronics.	Searches on his laptop mostly, uses ChatGPT the most since it “knows him”. While on his phone , uses chrome to search, and doesn’t have a dedicated app for searching. Goes through the cited links and found Google AI mode’s source selection not aligned with his preferences.	Despite using AI for day to day, still uses Google search traditionally Didn’t know about AI mode, tracks the summary but doesn’t double click on the summary through conversations.	Starts with an AI search but if doesn’t get satisfactory answers does a manual deep search and a deep research on ChatGPT in parallel. Uses Chrome to search on phone. Doesn't have AI apps on his phone	Felt confused when he say nano banana integrated into the Google AI Search. Didn't understand why anyone would need that feature. Really likes how ChatGPT “knows him” which is preventing him from switching products	H1 checked. He does care about the sources. H2 didn't check out. H3 not applicable
Akhil Harikumar, 26 Works at Google as a Security Engineer	Uses Google AI Mode (but kept calling it a Gemini wrapper not knowing the difference). Uses ChatGPT for learning. Searches using chrome and siri on his phone. On his laptop he defaults to ChatGPT or Google (Gemini as he called it) but defaults to ChatGPT because it knows him. Really likes the summary from Google, and trusts google’s selection of links.Prefers Reddit, and X over other sources.	Despite being in Google, didn’t know about AI mode. He used it but doesn't default to the tool for searching. Uses Siri for searching and it defaults to ChatGPT. Doesn’t cross check links when answers from Google. Trusts the answers.	While searching on his phone uses siri or chrome tab. Doesn't go tho the Google.com landing page. On his laptop goes to ChatGPT to search.	When exceed conversation limits, found ChatGPT hallucinating, which was frustrating. Was surprised when he found out about AI Mode.	H1 didn’t really fit H2 also didn’t fit H3 was not applicable.

SWOT Analysis

STRENGTHS



1. Users constantly praise the summary at the top of their google searches, gives them answers quickly
2. Users are still habitual to google searches for quick questions, either on their phone or browser
3. Google search still a market leader in search, AI Mode still in infancy (90.3% share)
4. Users trust Google's answers.
5. 2B MAU for overview, and 100M MAU for AI mode, led to 10% increase in search vol ([source](#))

WEAKNESSES



1. Default search habits prevent discoverability of AI mode (search via the url bar)
2. Shallow depth of sources, limited to 10-12 sources leads to incorrect answers ([source](#))
3. Product confusion. Don't know AI mode, confuse it with Gemini or AI overviews.
4. Perception of data privacy issues. Samrat thought that using Google AI mode will lead to personalised ads based on history.

OPPORTUNITIES



1. AI mode distinction and discoverability a low effort way to improve acquisition
2. AI mode/overviews has led to 10% increase in search volume. Increased monthly users will increase attention on the search surface.
3. Reliable information ties back to the source. A better citation ux, and source curation will build trust of serious users.
4. 71% search on mobile devices. AI mode experience on mobile devices an opportunity to acquiring and activating users.
5. Competitors verbose in response, shorter, quicker replies valuable to users.

THREATS



1. Users default to ChatGPT for prolonged conversations because it "knows them".
2. If zero-click workflows become popular, publishers are disincentivated to post good content on the web as their traffic drops, leading to less information for the AI mode.
3. ChatGPT has 81% market share in AI chatbot search, perplexity 6%, and Gemini 3%. Habits are formed and difficult to recover market share.
4. Siri defaults to ChatGPT, threatening mobile first search market capture.

Persona: AI-Aware Information Seeker



Name: Ajay Raj
Age: 28
Location: India

Uses AI tools to look up for personal and work related answer, but finds the source selection and speed frustrating. Feels that Google's data can be trusted for accuracy, but doesn't know about AI Mode

Goals:

Motivated to get trustworthy information quickly with relevant clickable links for quick verification.

Frustrations:

- Finds ChatGPT's answers for short answers verbose, prefers shorter answers when easy
- Doesn't trust AI with numbers, still refers to trusted sources and double checks AI's replies. Finds AI's source selection frustrating sometimes.
- Finds the number of options for searching in the market frustrating. Has been using Google for a while and defaults there but misses the AI search capabilities ChatGPT provides
- Finds ads in the search experience frustrating. Prefers lesser ads and more high signal information. Likes ChatGPT for that.

Behaviours:

- Uses Google search on the browser's url bar for quick answers.
- Uses ChatGPT for deep research and conversations
- Prefers trustworthy information, clicks through links to verify the source (knows AI can hallucinate)
- Defaults to Google on his phone, but ChatGPT on his PC.
- Limited awareness when on Google, missed AI mode repeatedly.

“

If I type a simple question on Google, the very first word gives me the answer. But ChatGPT will explain the entire history... I don't want to know all that. I just want the answer, tell me quickly and finish

”

Pain Points -> Business Goals -> Prioritised

1. Users who encounter AI Overviews have no clear pathway to transition into AI Mode for deeper exploration. The two experiences look and feel similar, so users don't see AI Mode as a distinct, higher-value tool. This leads to accidental rather than intentional usage, resulting in low organic acquisition despite 2B MAU on AI Overviews.
2. AI-aware users default to Google for quick answers via the url bar, but this inherent search muscle memory is creating a discovery gap for AI mode, leading to lower user activation, preventing a potential increase in search volumes.
3. AI-aware users trust AI answers when their preferred sources are cited. Incorrect or irrelevant sources leads to lower trust in AI mode's answer, leading to lower activation, pushing users to competitors for their AI searches (ChatGPT/Perplexity) which impacts the number of paying subscribers (most users pay for 1 or 2 services)



Prioritisation: Users are already on Google (2B MAU on AI Overviews). The gap isn't getting users to Google, it's moving them from AI Overviews to AI Mode.

- **Acquisition** is the biggest lever right now - activation follows naturally since users already type to query
- Retention and trust matters, but only after users are in the door

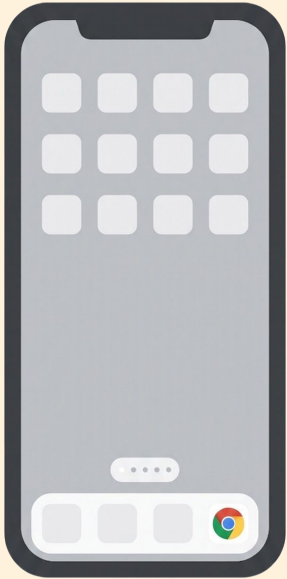
Priority: Pain point #1

Goal: Increase AI mode awareness in existing Google users from ~7% (100M MAU of 1.5B users) today to 13.5% (200M MAU) over 90 days by improving discoverability.

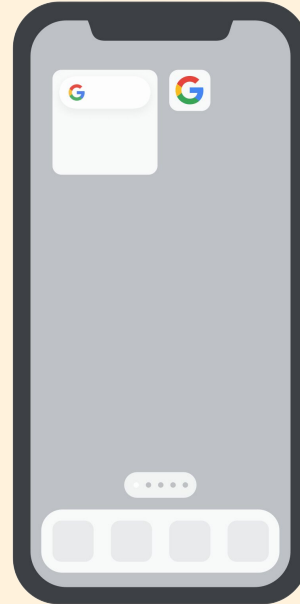
Solutioning

How might we help users discover AI mode through their natural search **workflows**?

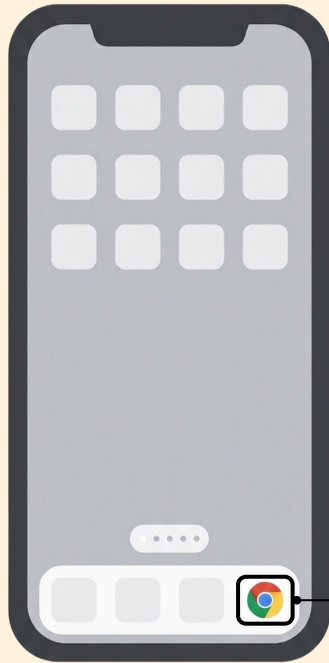
Flow 1: Mobile | Search using Chrome



Flow 2: Mobile | Search using Google's App/Widget

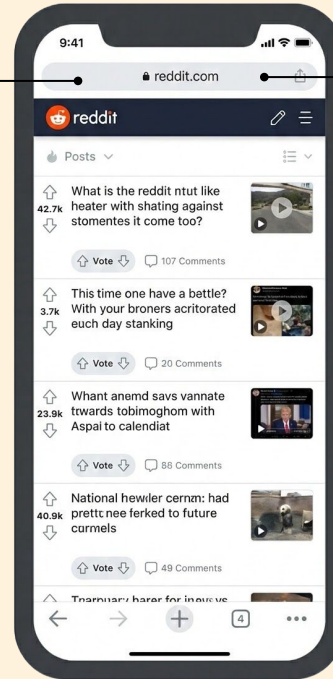


Flow 1: Mobile | Search using Chrome

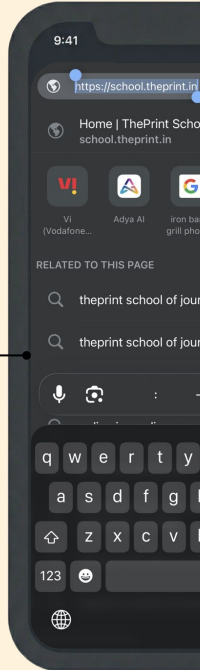


Most interviews highlighted chrome as the default muscle memory for search

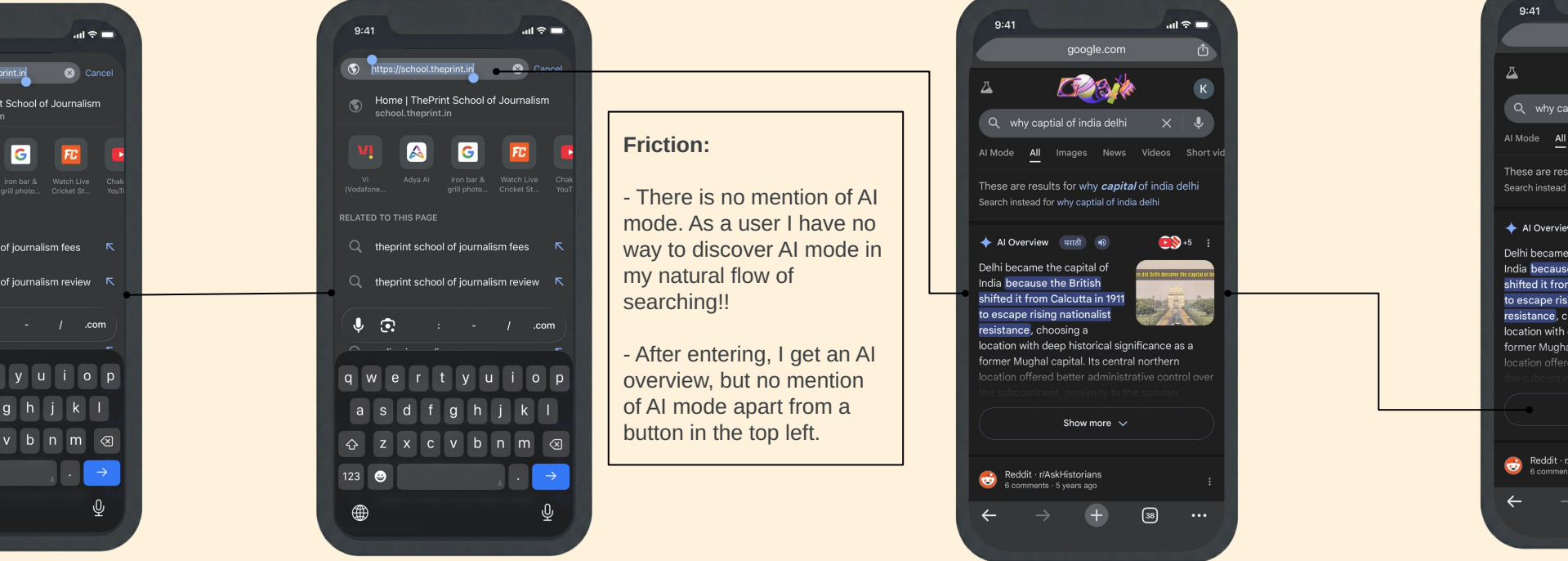
Insight: Despite widgets and dedicated applications, most users default to Chrome



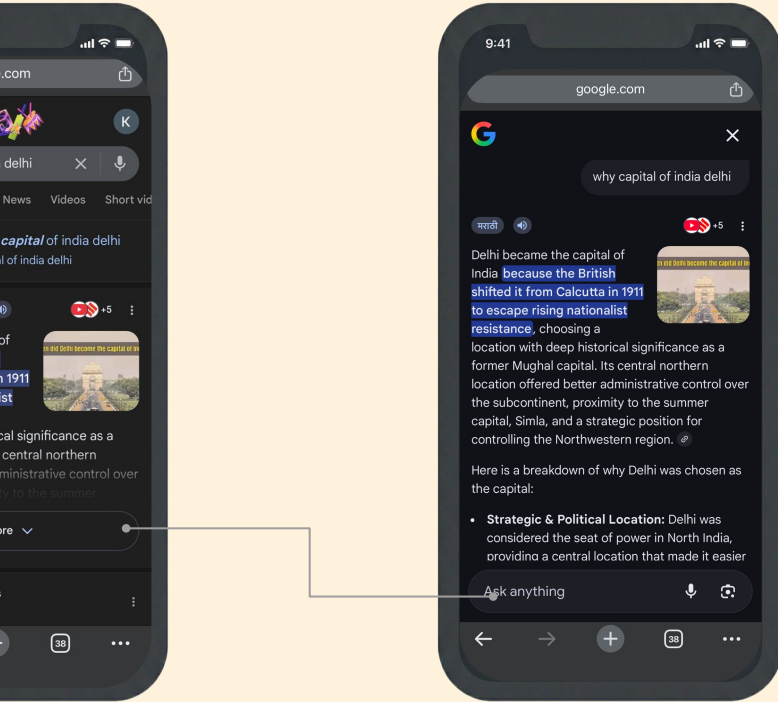
Chrome when opened, defaults to the last open tab, and not the home screen - which hampers Google AI Mode Discoverability



Flow 1: Mobile | Search using Chrome



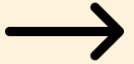
Flow 1: Mobile | Search using Chrome



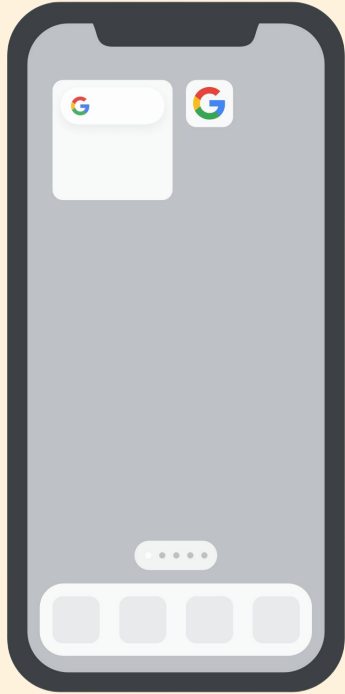
Friction:

- User's discover the AI mode after multiple clicks. They land on the chat interface after clicking on “Show more” which is a general CTA, without limited user recall the next time they search.

Let's explore Flow 2

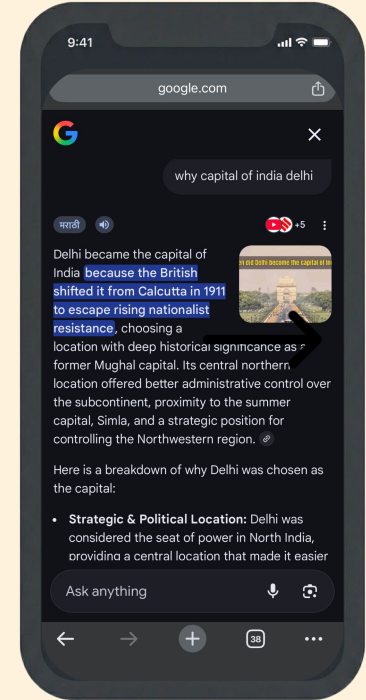


Flow 1: Mobile | Search using Chrome

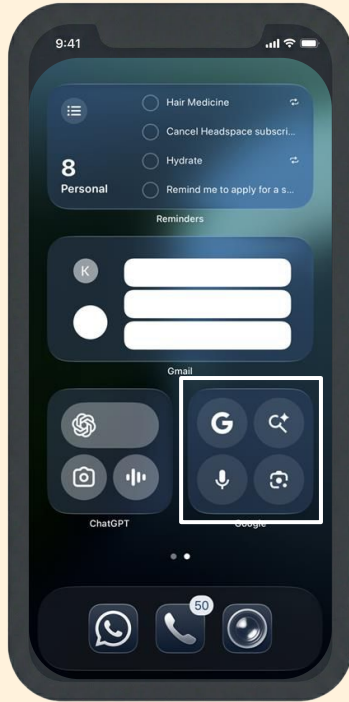


Friction:

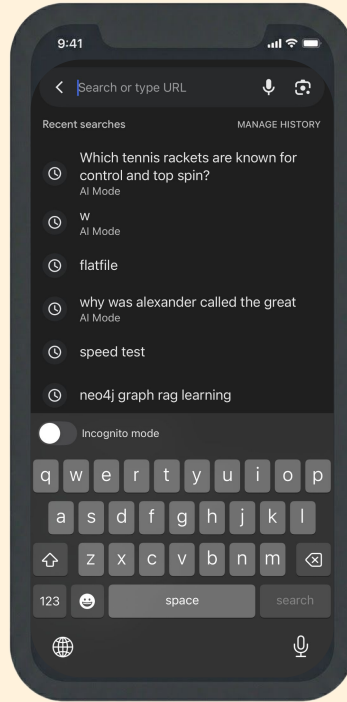
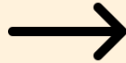
- User's discover the AI mode after multiple clicks. They land on the chat interface after clicking on "Show more" which is a general CTA, without limited user recall the next time they search.



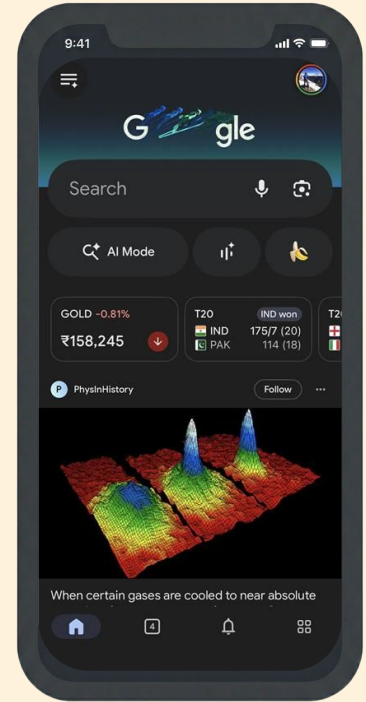
Flow 2: Mobile | Search using Google's App/Widget



Google Widgets redirect to Google but open the search bar and not the home page. One can't discover AI mode



Upon backing from the search screen, I finally see the AI mode option



Comparison between flows

71% of search happens on mobile devices | Prioritising mobile for improving discoverability gives our solutioning focus.

Flow 1



1. All interviews highlighted flow 1 for searching on their mobile device.
2. Flow 1 has the most points of friction, and a lower chance for the user to discover AI mode

Flow 2

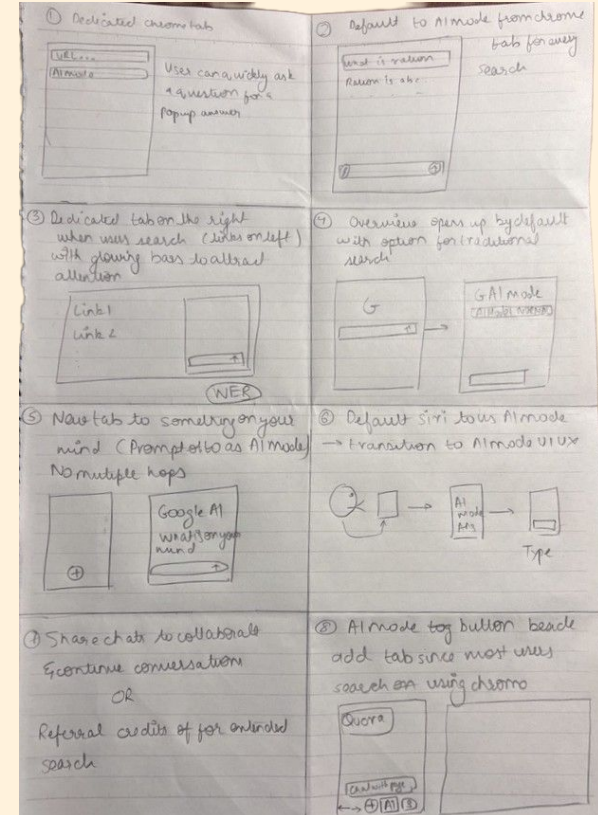
1. Assumption: AI aware installing the Google Search widgets are power users and are more likely to be using AI Mode.
2. AI Mode is available in the widget as a direct search option, allowing users good discoverability.

Solutioning

How might we help users discover AI mode through their natural search workflows?

1. New tab to AI mode w/ option to switch to traditional search
2. Intent detection when searching to AI mode
3. Siri to AI mode (default search experience - partnership with Apple) Sh
4. AI mode icon besides new tab to search using AI mode both in relation to the tab or a new query (dia analogy)
5. Referral credits
6. Shareable link for conversations to collaborate

Crazy 8s



Solution Prioritization (RICE)

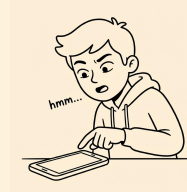
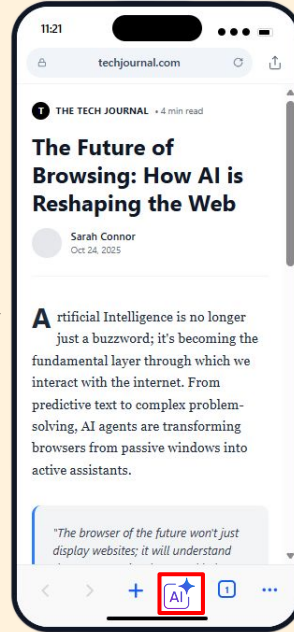
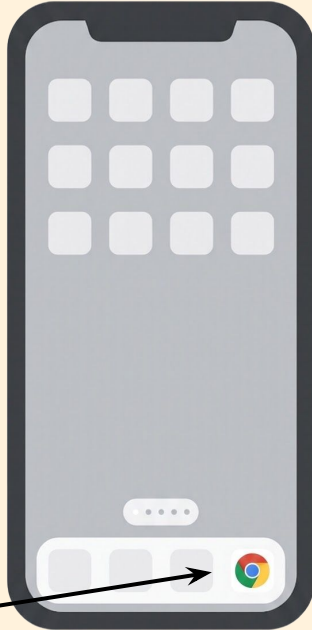
Solution	Reach	Impact	Confidence	Effort	Score
AI Mode embedded in Chrome	3	3	2	2	9
New tab to AI mode	3	1	2	1	6
Intent Detection to AI Mode	3	2	2	2	6
Referral Credits	2	1	1	1	2
Shareable Chats	1	1	2	1	2
Siri to AI mode	1	2	2	3	1

Solution 1: AI Mode Embedded in Chrome

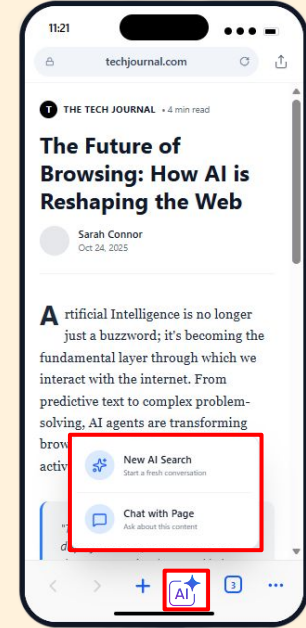


What are some
internship options in
product management?

Let me search on Google
-> Heads to Chrome

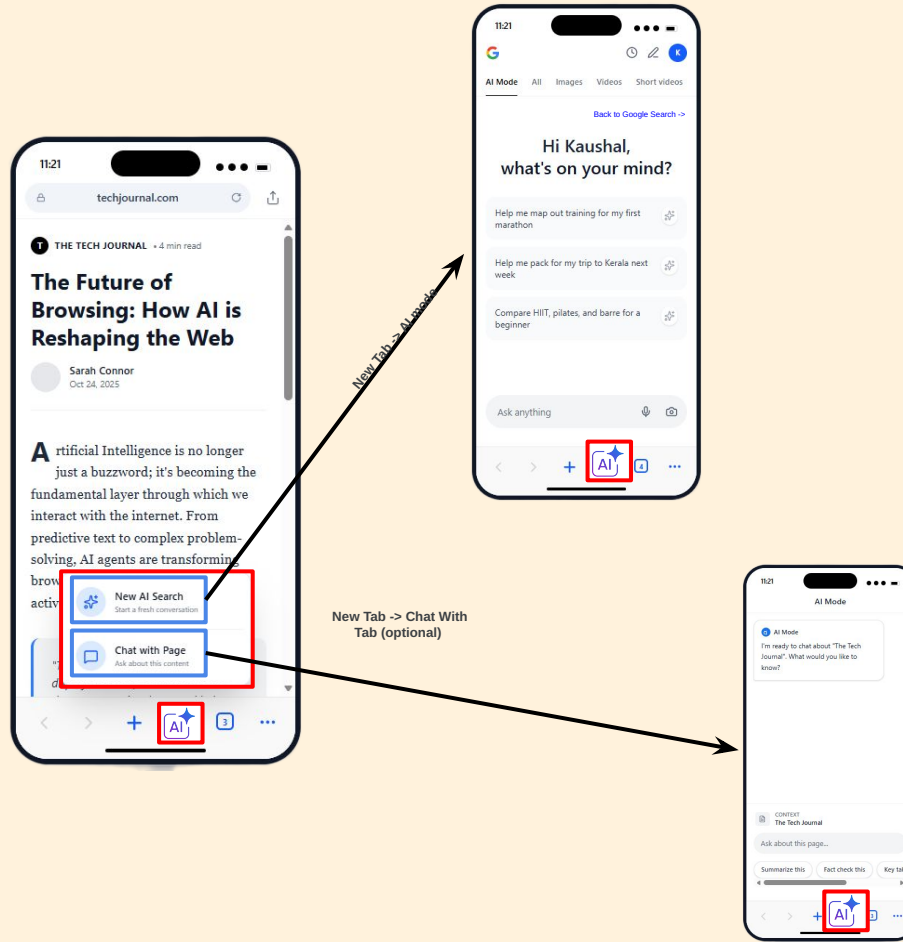


AI? In Chrome?
What is this?



Solution 1: AI Mode Embedded in Chrome

P0



Inspired from **Dia** or **Comet**. They **embed** their search experience within the **browser**.

Given that users are mostly going to **Chrome** to **search**, embedding AI mode within chrome, closer to the user's high **frequency** actions (**new tab**), we can ensure **discoverability**, and **accessibility** for the user.

Pros:

1. Increased Discoverability
2. Options to extend usage, and features (sets a vision for the product within chrome)
3. Creates muscle memory for users (chrome->AI mode)
4. Gives options to the users to search using the url bar, and AI mode, not disrupting their existing usage pattern.

Risks:

1. Due to user's existing muscle memory, they might miss the button and head to the url bar.

Link to the prototype:

<https://ai.studio/apps/d794b97d-8816-42ee-bd98-81b6a2817f53>

Solution 2: Intent Detection -> AI Mode

P1



Why color of sky blue?

Let me search on Google
-> Heads to Chrome



Based on the intent of the user's question, the google search turns from the standard search to AI mode. For example, color of the sky, as opposed to why color of sky blue? The trigger will be based on their intent, if they are asking for detailed, descriptive, prompt based search, then search will default to AI mode.

Pros:

1. Seamless transition, not too obtrusive way to introduce the option to search with AI mode.
2. Naturally users head to the url bar to search. Improves discoverability within the search bar!

Risks:

1. What if users queries aren't descriptive
 - a. Assumption is that user are now habitual to descriptive searches (needs to be validated with data)

Link to the prototype:

<https://ai.studio/apps/d794b97d-8816-42ee-bd98-81b6a2817f53>

Metrics

Goal: Increase AI mode awareness in existing Google users from ~5% (100M MAU of 2B users) today to 10% (200M MAU) over 90 days by improving discoverability.

Metric Type	Name	Definition	Why it matters
Primary	CTR	CTR of chrome users = # of users acquired	CTR defines the success of AI mode placement in chrome which leads to new users discovering AI mode.
Secondary	AI Mode MAU	An increase in MAU supports higher discoverability	Our goal is to increase the number of users discovering AI mode. An increase in MAU supports our goal
Secondary	Query Volume by acquired users	An increase in the number indicates activated users sourced from AI mode. Proves the success of the feature	# of queries indicates user adoption.
Guardrail	Search Volume on Chrome	Google search volume on chrome	A reduction indicates that the feature is hurting our numbers, we should roll back and question