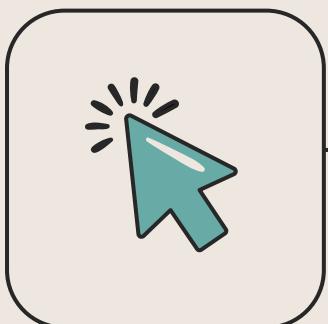


Human Computer Interaction

TERM LONG ASSIGNMENT

**FINAL REPORT
& PRESENTATION**



www





SOCIAL MEDIA: YOUTUBE SOLUTION PITCH

Final Report
& Presentation

Group: Benjamin Robinson (2000724), Errol Hunter (1905299) and Iyana Taylor (2209566)
Course: Human Computer Interaction (UN1) Monday 8 AM Tutorial with Ms. Nadine Maitland

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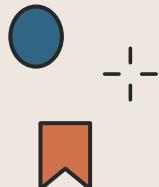
The Final Prototype



Conclusions 05

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References



Why This Project?

- Users often forget video titles, creators, or exact keywords
- Current Watch History search relies heavily on recall, not recognition
- Most users remember scenes, topics, thumbnails, creators' faces
- Existing tool don't match how users actually remember content



Project Objectives 01





- Help users rediscover previously watched YouTube videos more easily
- Support natural language searching (not just keywords)
- Reduce scrolling, frustration, and time spent searching
- Combine visual previews, contextual AI search, and intelligent filtering
- Improve accuracy and relevance of Watch History results

Overview of Our Design Process

02





Mixed-methods data gathering

- Semi-structured interviews
- Online survey
- Secondary data/document review



Triangulated insights → user requirements



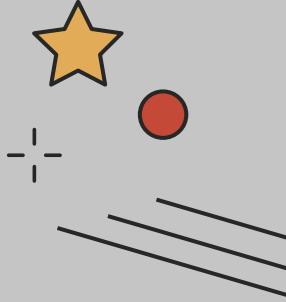
Thematic coding + quantitative validation



Requirements → design goals → 3 concept tasks → prototype



Key Data Insights

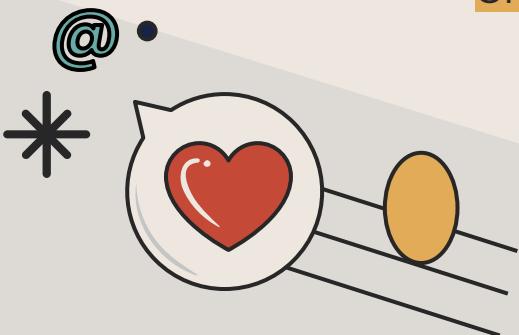


Strong reliance on visual memory (thumbnails, scenes)

High frustration with scrolling and poor keyword matches

72% remember topics, 66% remember thumbnails

Only 15% rely on the History page to find old videos



88% showed strong interest in natural language search

Design Goals



Support natural,
human-like recall

Prioritize visual
previews (recognition >
recall)

Provide contextual
follow-up questions

Enable
multi-dimensional
filtering

Increase search
accuracy and reduce
search time

Reduce frustration and
scrolling



Core User Requirements

**Visual
Recognition
Support**

**Natural
Language /
Semantic Search**

**Smart Filtering &
Categorization**

These directly shaped our 3
main design tasks.

Task 1 (Iyana): Visual Preview & Recall

- Large thumbnail grid
- Quick 3-5 second looping previews
- Highlighted scenes
- Goal: Help users recognize the right video fast
- Supports visual memory, reduces reliance on titles



Task 2 (Benjamin): Contextual AI Search

- Users type natural language (“that fridge repair video...”)
- AI understands vague descriptions
- System asks smart follow-up questions
- Maintains context across queries
- Produces timestamped segments and refined results



Task 3 (Errol):

Smart AI

Filtering

- Filters by topic, creator, video length, timeframe, etc.
- Automatically recommends filters based on query
- Reduces long scrolling through watch history
- Helps users refine results quickly and intuitively





- Large thumbnail grid with modern card-style UI
- Clear preview/description/play icons
- Natural language search bar at top
- Filter chips that adapt dynamically
- Light/dark adaptive interface
- Micro-animations for clarity and responsiveness

Concrete Design Overview

Sketches of Our Chosen Design

View the images below of the sketches that translated to our initial prototype or access the [Clickable Prototype](#):



① MAIN WATCH HISTORY PAGE

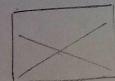
≡ ▶ YouTube Search 19 ⓘ ⓘ @

Watch History

All Videos Shorts

Today

 Caption
Channel Views
Description



Search watch history ⚡

Clear all watch history

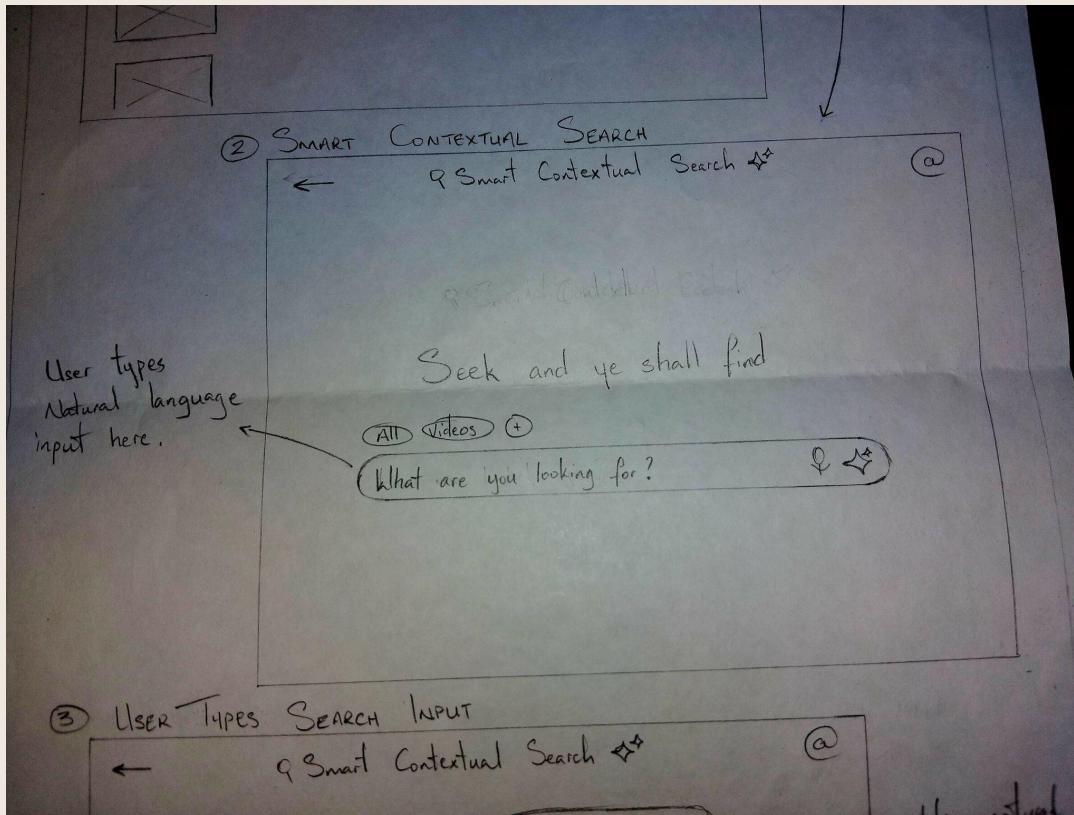
Pause watch history

Manage all history

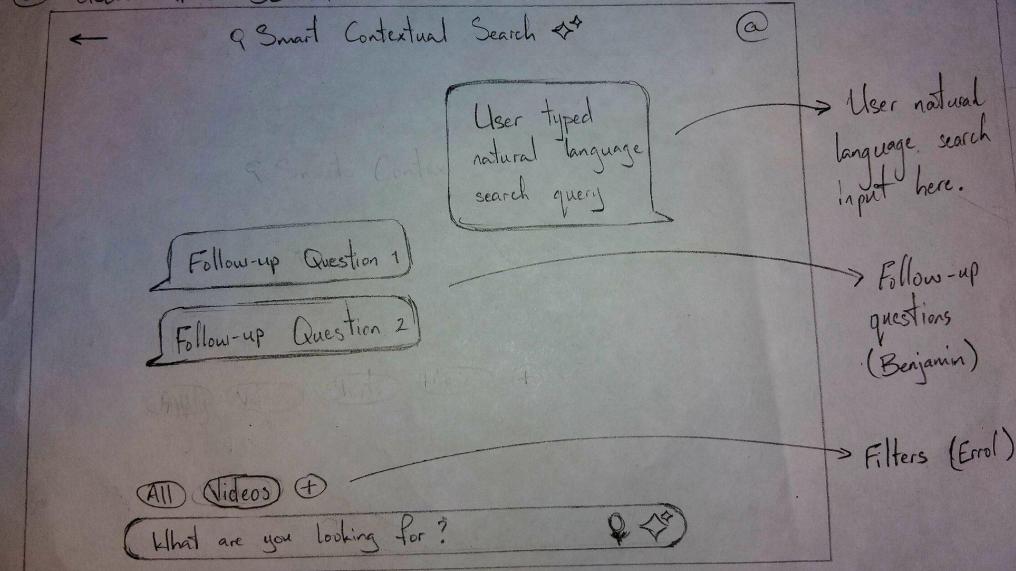
→ User clicks star
(⚡) for Smart
Contextual Search
mode.

② SMART CONTEXTUAL SEARCH

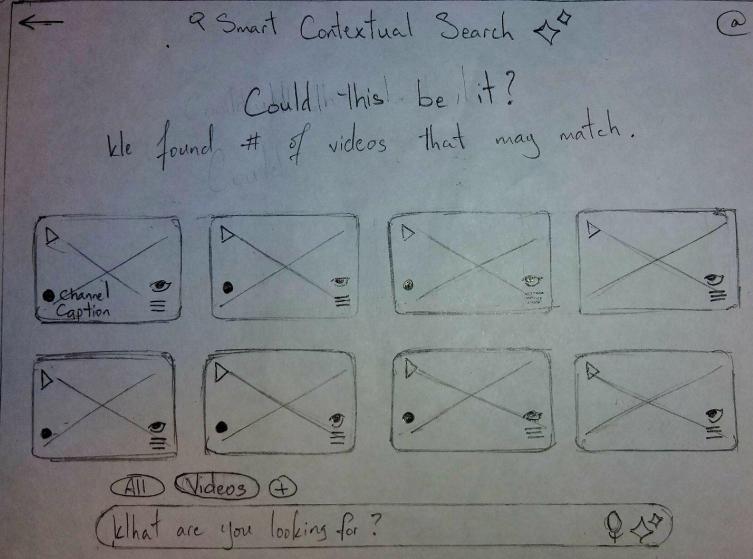
← Smart Contextual Search ⚡ @



③ USER TYPES SEARCH INPUT



④ VISUAL PREVIEW WITH VIDEO THUMBNAIL



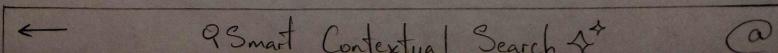
Icons on thumbnail:

▷ : play full video

eye : play video preview

≡ : view video description

⑤ PREVIEW AND DESCRIPTION ICONS CLICKED



All Videos +
What are you looking for? ♀ ⚡

⑤ PREVIEW AND DESCRIPTION ICONS CLICKED

← Q Smart Contextual Search ↗ @
Could this be it?
We found # of videos that may match

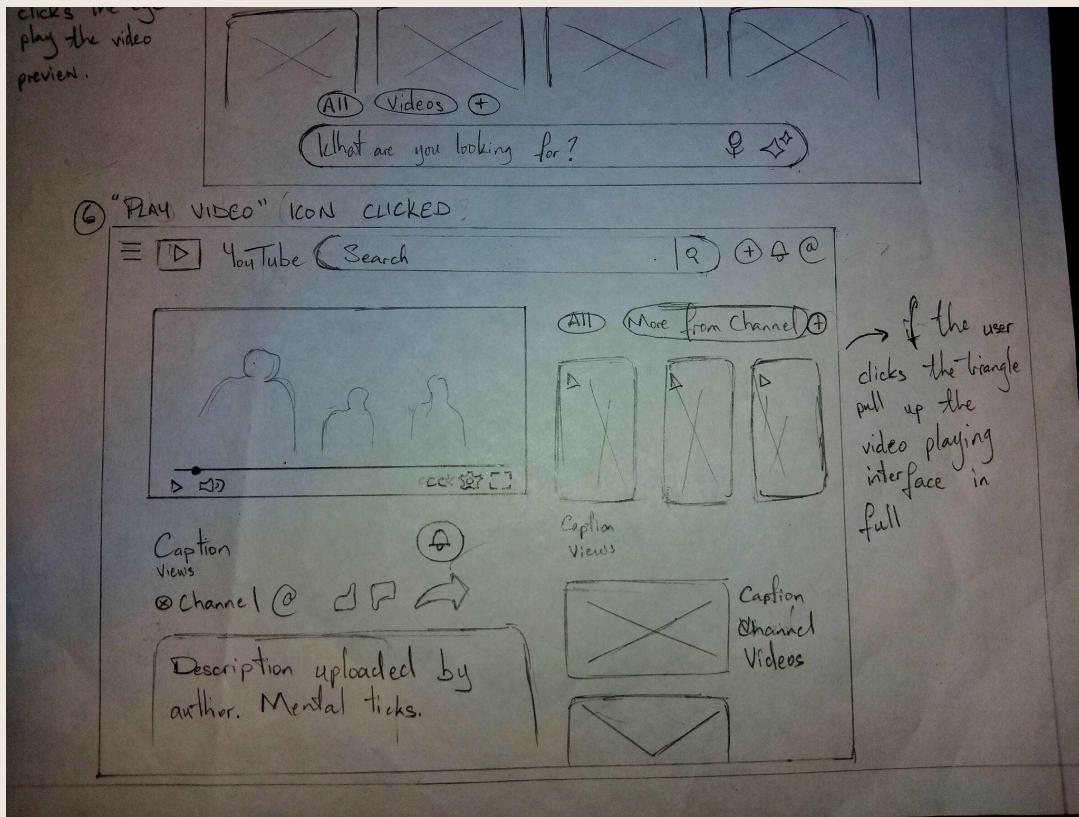
if the user clicks the burger icon pull up the video description.

if the user clicks the eye play the video preview.

All Videos +
What are you looking for? ♀ ⚡

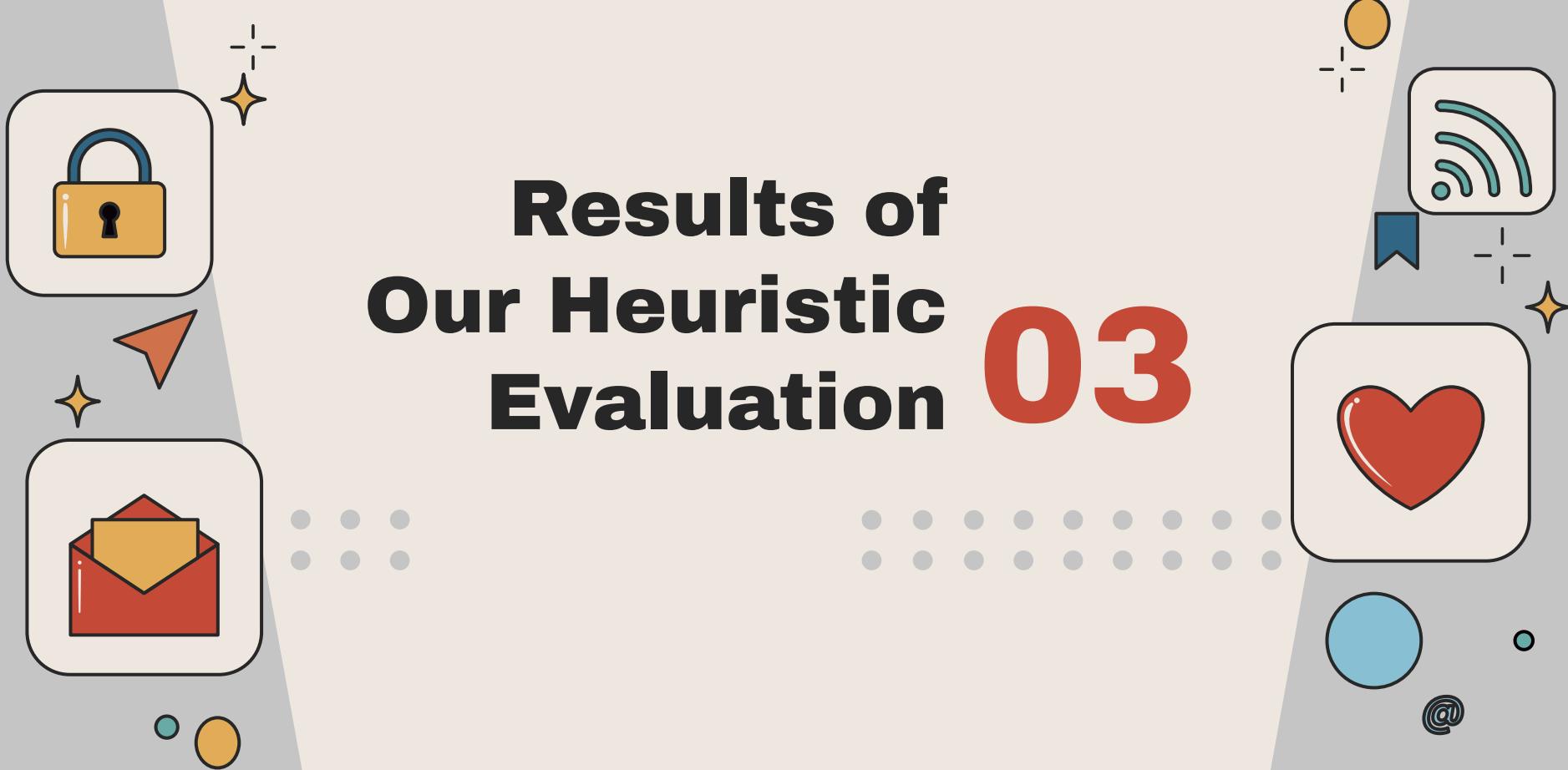
⑥ "PLAY VIDEO" ICON CLICKED

= ▶ YouTube Search | 9 + ♀ ⚡



Results of Our Heuristic Evaluation

03



Heuristic Evaluation: Key Issues Identified



Ambiguous filtering chips
(unclear purpose)

Side menu clutter on main page

Follow-up questions lacked interaction clarity

Tone mismatch (“Seek and ye shall find”)

No usability issues with preview, description, or play icons

Heuristic Evaluation: Solutions Implemented



**Added clarifying
text to filter
chips**

**Removed
unnecessary
right-hand menu
items**

**Updated
follow-up
question flow
with clear
instructions**

**Reworded
unclear
instructional
text**

**Maintained
consistency in
UI language and
tone**

The Final Prototype 04





- AI-powered natural language search
- Smart follow-up questions
- Visual-first result layout
- AI-driven auto-suggested filters
- Cleaner, simpler Watch History interface
- Supports recognition, recall, and refinement at once

After receiving feedback from the peer review, updates were made to the initial prototype. See the comparative images below or go to the [Updated Clickable Prototype](#):

Summary

1. MAIN WATCH HISTORY PAGE

The screenshot shows the YouTube Watch history page. At the top, there's a navigation bar with the YouTube logo, a search bar, and user account icons for 'Create', 'Bell', and 'Profile'. Below the navigation is a section titled 'Watch history' with a search bar labeled 'Search watch history' and a star icon.

Below the search bar, there are filter buttons for 'All', 'Videos', 'Shorts', 'Podcasts', and 'Music'. A 'Today' section displays two video thumbnails:

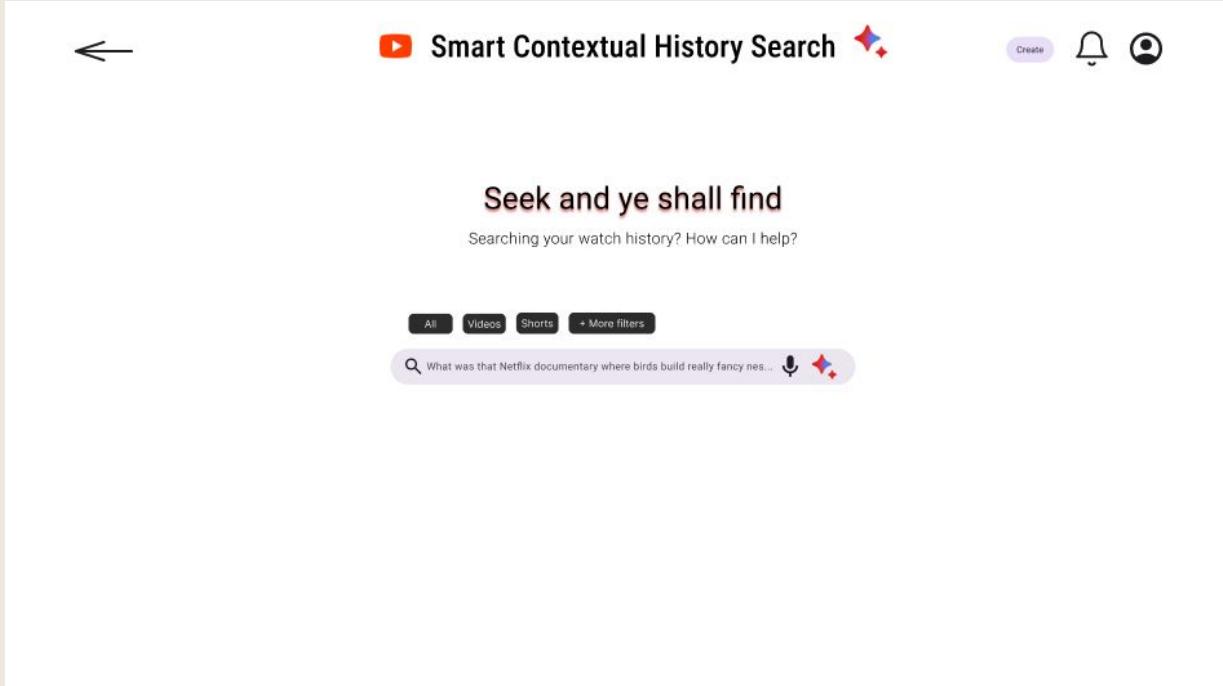
- Hurricane Melissa**: A thumbnail showing a satellite image of Hurricane Melissa with the text '150 MPH SEEK SAFE SHELTER EXTREMELY DANGEROUS' overlaid.
- This just in! Latest update on Hurricane Melissa**: A thumbnail with the text 'This just in! Latest update on Hurricane Melissa' and a link to 'Weather Updates Jamaica'.

To the right of these videos is a vertical ellipsis menu. Below this, another video is listed:

- Total Drama Action LIVE | 24/7 All Episodes | Full Season Classic**: A thumbnail showing characters from the show Total Drama Action.

At the bottom of the page is a horizontal ellipsis menu, followed by a decorative footer consisting of a grid of gray dots.

2. SMART CONTEXTUAL HISTORY SEARCH



The image shows a screenshot of a search interface titled "Smart Contextual History Search". At the top left is a back arrow icon. To the right of the title are three small circular icons: a purple one labeled "Create", a white one with a bell icon, and a white one with a user profile icon. Below the title, the text "Seek and ye shall find" is displayed in a stylized font, followed by the subtitle "Searching your watch history? How can I help?". Underneath the subtitle are four filter buttons: "All", "Videos", "Shorts", and "+ More filters". A search bar at the bottom contains the query "What was that Netflix documentary where birds build really fancy nests..." with a microphone icon and a small decorative graphic.



3. USER TYPES SEARCH INPUT

The image shows a screenshot of a mobile application interface titled "Smart Contextual History Search". At the top right are three icons: "Create", a bell, and a profile picture. Below the title is a text bubble containing a question: "What was that Netflix documentary where birds build really fancy nests to attract mates?". A small circular icon with a person symbol is positioned to the right of the bubble. In the center, there is a prompt: "Please select a follow-up and provide an answer to help refine your search:". Below this, two options are presented in rounded rectangular boxes: "Do you remember if it focused on a specific region or species – like tropical birds or bowerbirds?" and "Was it part of a larger nature series, or a standalone documentary?". The second option is highlighted with a red border. At the bottom, a response is shown in a box: "It was a standalone documentary". A small circular icon with a person symbol is to the right of this response. At the very bottom, there is a navigation bar with buttons for "All", "Videos", "Shorts", "Docu", "Birds", and "+ More filters". Below the navigation bar is a search bar with the placeholder text "What are you looking for?" and a microphone icon.

Smart Contextual History Search

What was that Netflix documentary where birds build really fancy nests to attract mates?

Please select a follow-up and provide an answer to help refine your search:

Do you remember if it focused on a specific region or species – like tropical birds or bowerbirds?

Was it part of a larger nature series, or a standalone documentary?

It was a standalone documentary

All Videos Shorts Docu Birds + More filters

What are you looking for?

4. VISUAL PREVIEW WITH VIDEO THUMBNAIL

← Smart Contextual History Search ⚡ Create Bell User

Could this be it?

We found 8 videos that may match your search

NETFLIX OUR PLANET
FULL EPISODE

NETFLIX DIGITAL EXCLUSIVE

NETFLIX OUR PLANET FULL EPISODE

BIRDLIFE A Closer Look

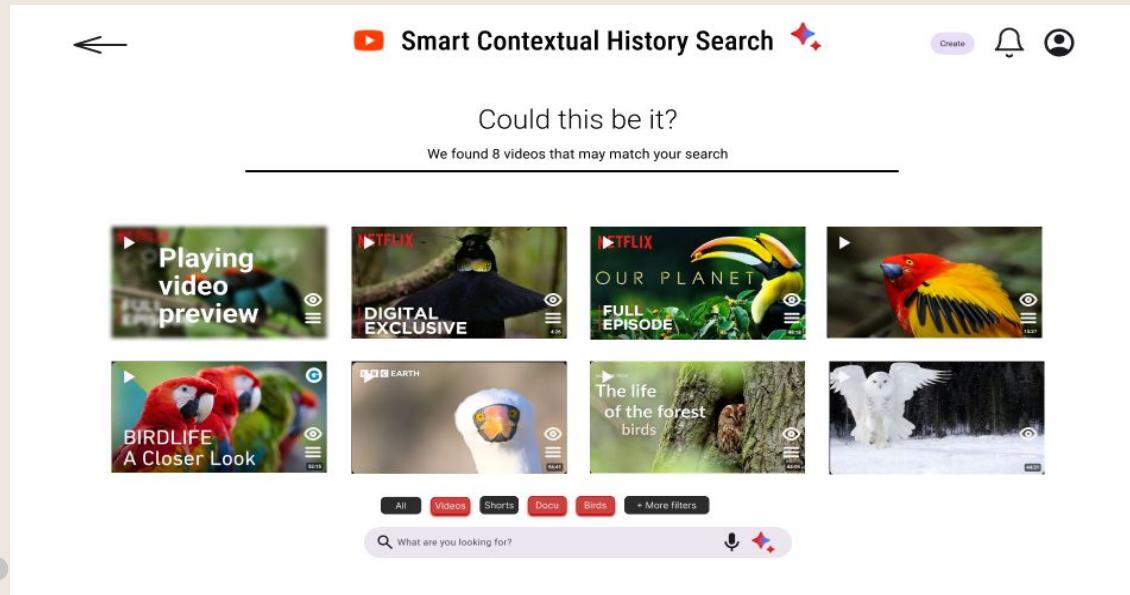
THE LIFE OF THE FOREST BIRDS

The life of the forest birds

All Videos Shorts Docu Birds + More filters

What are you looking for? Microphone ⚡

5a. PREVIEW ICON CLICKED



5b. DESCRIPTION ICON CLICKED

← Smart Contextual History Search ⚡

Create Bell User

Could this be it?

We found 8 videos that may match your search

NETFLIX OUR PLANET FULL EPISODE

► Video description posted by publisher. + Channel Name

► NETFLIX OUR PLANET FULL EPISODE

► BIRDLIFE A Closer Look

► EARTH

► The life of the forest birds

All Videos Shorts Docu Birds + More filters

What are you looking for? ⚡

6. PLAY ICON CLICKED

The screenshot shows a YouTube video player interface. The main video thumbnail features two vibrant blue and red birds perched on a branch, with the text "NETFLIX OUR PLANET FULL EPISODE". Below the thumbnail, a description box contains the text: "Climate change" with a link, followed by "United Nations - Climate change refers to long-term shifts in temperatures and weather patterns. Human activities have been the main driver of climate change, primarily due to the burning of fossil fuels like coal, oil and gas." At the bottom of the video player, there are controls for "Subscribe" (81.9M subscribers), "Share" (219K), "Download", "Clip", and a three-dot menu. The video has 35M views and was posted 5 years ago. A comment section below shows 6,996 comments and a "Sort by" dropdown.

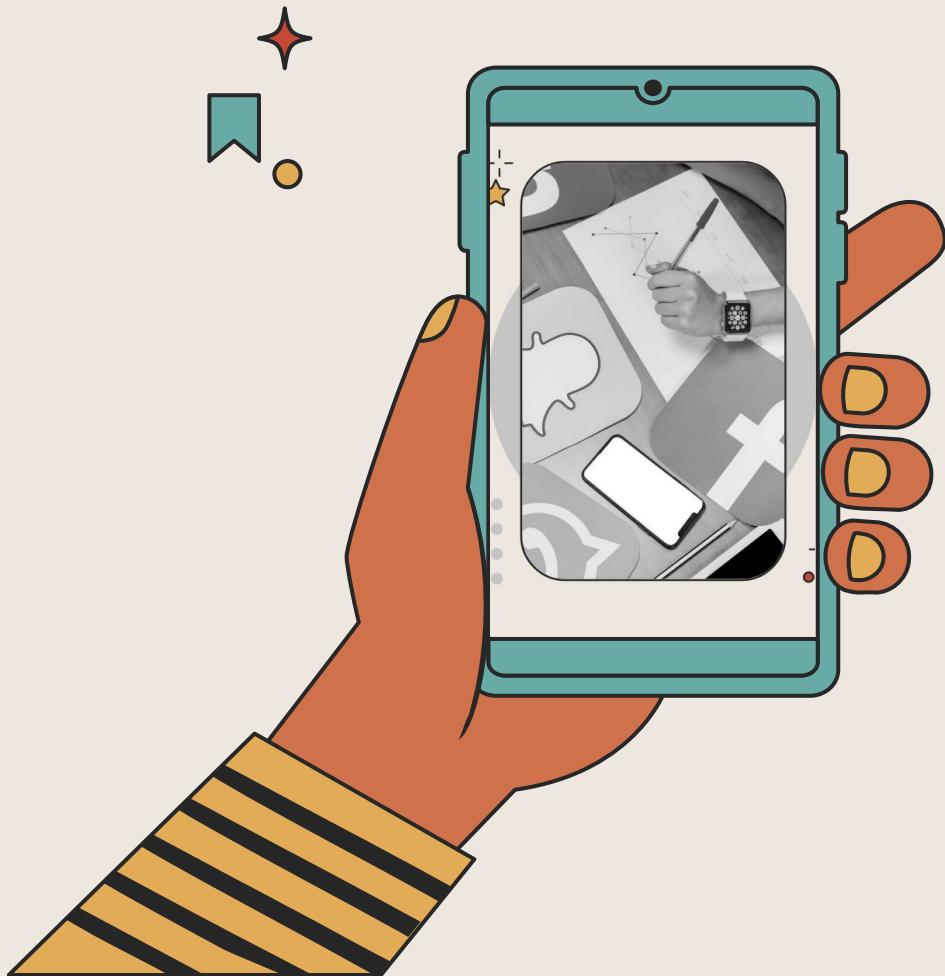
The right side of the screen displays a sidebar with a list of related video thumbnails. The categories shown are "All", "From Netflix", "Planet Earth", and "Life on Our". The listed videos include:

- Our Planet | Jungles | FULL EPISODE | Netflix
- Our Planet | High Seas | FULL EPISODE | Netflix
- Giraffes, Zebras, and Lions | Savanna Safari Adventure | Wild Kratts
- The life of the forest. Natural abundance
- Octopus Social Life (Full Episode) | Secrets of the ...
- Journey Through The Seven Continents Of Our World | 4K ...
- Our Planet | Frozen Worlds | FULL EPISODE | Netflix

Conclusions 05

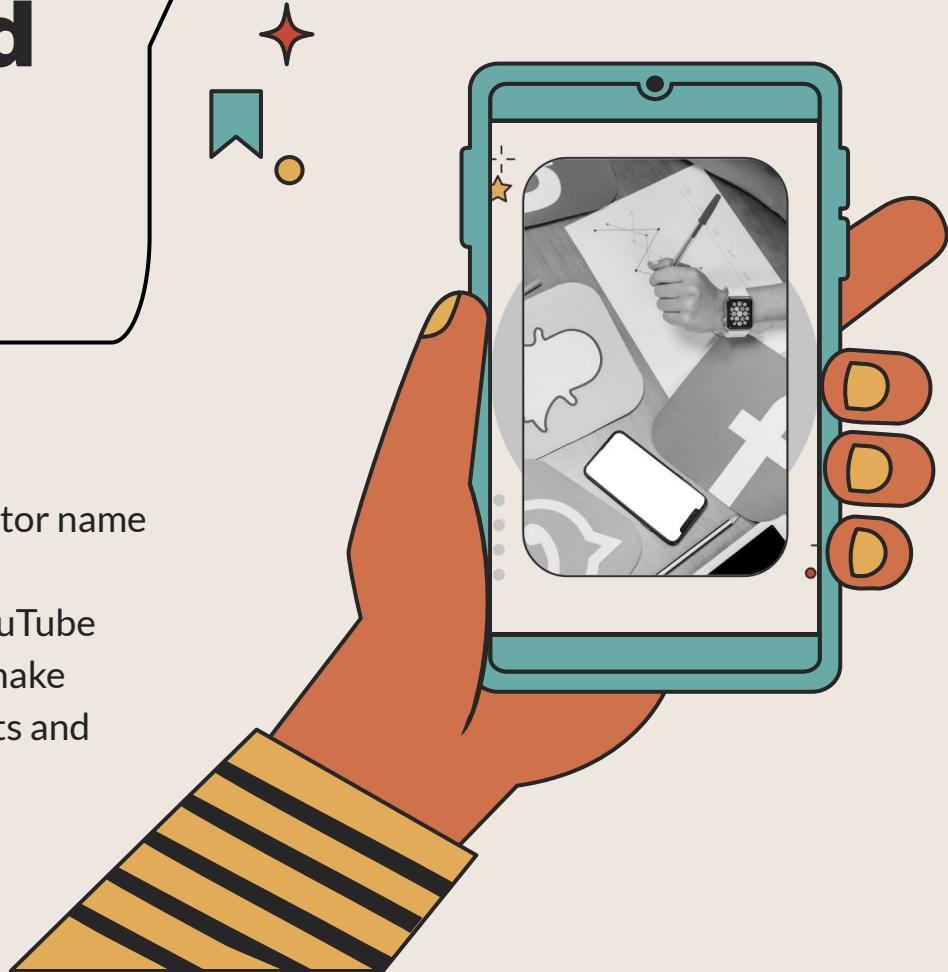


- The redesigned history search better matches how users remember videos
- Visual recognition, contextual AI, and smart filters work together
- Users save time, feel less frustrated, and get more accurate results
- Strong alignment between user needs → design goals → prototype



What We Would Improve with More Time

- Add fully interactive previews with hover-to-preview
- Allow users to sort results by date, creator name etc.
- Conduct prototype testing with real YouTube users to gain their feedback as well to make further adjustments to the requirements and subsequently, our final prototype.



06 | References

- Deghani, M., Niaki, M. K., Ramezani, I., & Sali, R. (2015). Evaluating the influence of YouTube advertising for attraction of. *Computers in Human Behavior*, 1.
- Ebardo, R., De La Cuesta, J., Catedrilla, J., & Wibowo, S. (2020). Peer influence, risk propensity and fear of missing out in sharing misinformation on social media during COVID-19 pandemic. In *Proceedings of the 28th International Conference on Computers in Education* (pp. 351–359). Asia-Pacific Society for Computers in Education.



THANKS!

Do you have any
questions for us?



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