

2025

UX design

Portfolio

Sarthak Tavate





CV

Sarthak Tavate

As an ambitious and perseverant individual, I am always keen on learning new skills and getting hands-on experience in the product design field. Form and functional problem solving through design process is my key area of interest.

Education



University of Maryland, BC, US (2024-current)

Ms. Human-Centered Computing
Research Assistant, department of Information Systems
Senator at Graduate Student Association
Member of the Graduate Student Organization



L'Ecole de Design, Nantes, France (2021)

Exchange Student, Brand Design



MIT Institute of Design, Pune, India (2018 - 2022)

Bachelors of Design in Product Design

team that curated a concept for a leading Japanese beauty and wellbeing MNC & was highly appreciated by the client and the Associate director of the SONG Studio.



Schneider Electric (Jan 2022- April 2022)

As an intern restructured & designed a BMS (Battery Management System), all stages in close collaboration with the Engineering team successfully executing the pitch.

Achievements



A'design Award Winner (Gold)

A' Design Award is the World's largest, most prestigious and influential design accolade.



Exhibition at MOOD, Italy

Physical exhibition of design at the Museum of Outstanding Design (MOOD) held on 18th June 2021 in Como, Italy.



International Stage

A non-member esteem at the World Design Consortium (WDC). International publications in Packaging of the World, Designers.org, Recursos Culturales.



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/sarthaktavate



Behance

/sarthaktavate



Website

<https://stavate1.wixsite.com/website>

Experience



Maryland Technology Internship Program (Jan 2025 - May 2025)

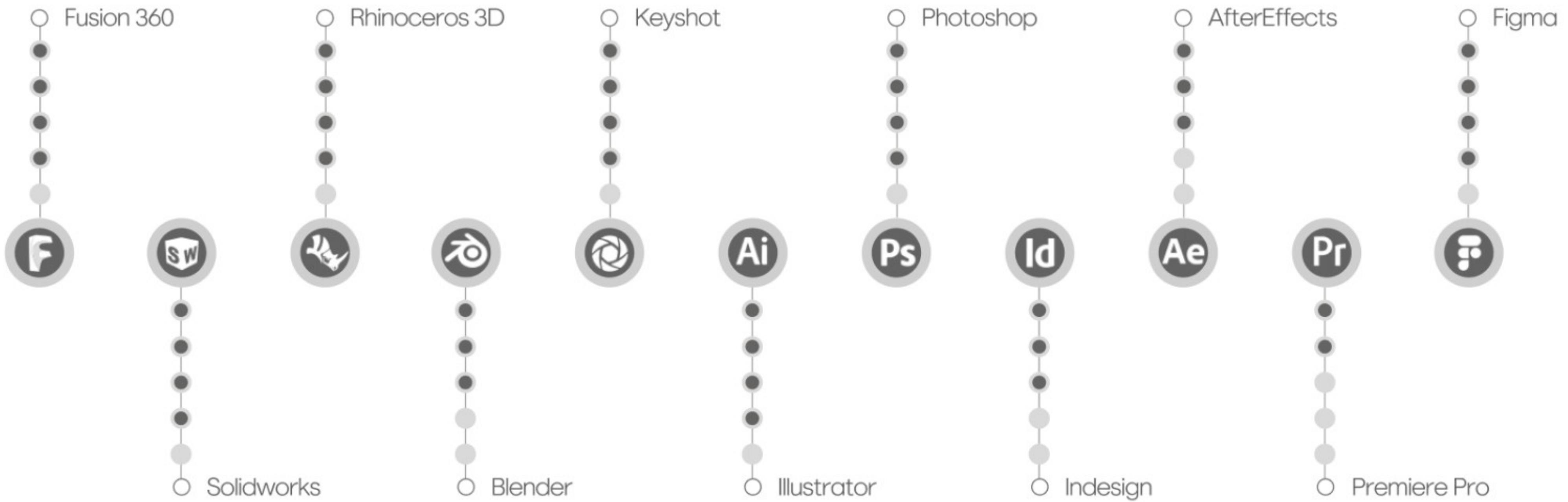
At the Cyber Village Networkers Incorporated (CVNI) employed as an Application Developer Intern, undertaking in-house and client projects for a variety of web and application requirements.



Accenture (Aug 2022- January 2024)

As a User Experience Designer, was an integral part of an Internal Accenture Team that undertook multiple highly confidential projects catered to the Accenture Leadership. As a 3D Designer shared a

Software Skills.



Analogue Skills.

- Research
- Sketching
- 3D Modeling
- 3D Rendering
- Prototyping

Languages.

- English
- Hindi / Marathi
- FR French (Beginner)
- IT Italian (Beginner)

Extra Curricular.

- Inter-batch Football Team
- Inter-college Table Tennis Team
- Sports Meet swimming relay
- Sports Meet cricket Team

Contents



101

Content



Contents





101



Discover

Popularity of Short Video Content Format

Biological

Dopamine Rush

Our obsession with short video apps is due to the brain's reward system. Any emotion triggers this dopamine release, making us feel good. This pleasurable sensation keeps us coming back for more.

mcleanhospital.org



Psychological

Instant Gratification

Short video apps offer instant gratification, a concept deeply rooted in human psychology. The ability to quickly scroll through a myriad of videos provides immediate satisfaction.

Frontier.org



Social

Social Validation

Short video apps have tapped into the social need by creating spaces where people can share their lives, express their creativity, and connect with others.

Researchgate.net



Innovational

Algorithms

Advanced algorithms enhance the user experience by curating content feeds. Algorithms analyze user behavior and preferences to deliver a stream of videos tailored to individual tastes, ensuring that users are constantly engaged with content that resonates.

ResearchGate



Technological

Feature Integration

Features such as augmented reality (AR) filters, special effects, and interactive challenges enhance creativity and engagement. Technological advancements make content creation accessible and fun.

ResearchGate



Influential

Creators & Virality

Features such as augmented reality (AR) filters, special effects, and interactive challenges enhance creativity and engagement. Technological advancements make content creation accessible and fun.

ResearchGate



Tik-Tok as a Market Leader

Top Countries

⌚ April 2024 ⚡ Worldwide

	U.S.A.	13.80%
	Brazil	8.84%
	Mexico	5.09%
	Indonesia	3.55%
	Vietnam	3.45%

Similarweb.com



Total Visits

⌚ April 2024 ⚡ Worldwide

6.600
Billion

Similarweb.com



Devices

⌚ April 2024 ⚡ Worldwide

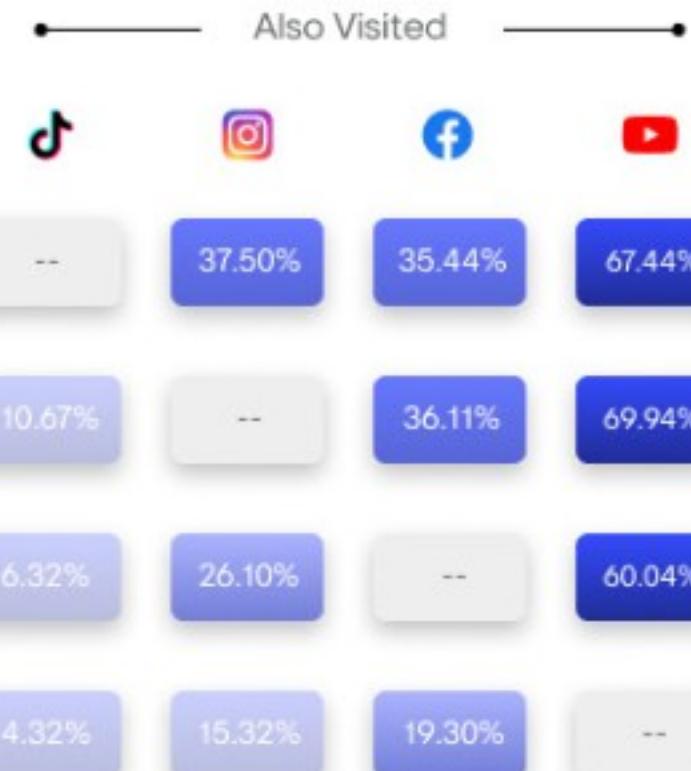


Similarweb.com



Cross-Browsing

⌚ April 2024 ⚡ Worldwide



Visitors to

Downloads

⌚ Nov 2023 - Apr 2024 ⚡ Worldwide



Similarweb.com

Popular Content

⌚ April 2024 ⚡ Worldwide

Comedy and Skits	500 Billion Views
Educational Content, Food and Cooking	200 Billion View
Dance, Lip-Sync, Pets and Animals	150 Billion
Fashion, Travel , and Motivational Content	100 Billio
Fitness, Wellness and Technology and Gadgets	50 Bil



Similarweb.com

Competitor Analysis

Application	TikTok	Reels	Shorts	Spotlight	facebook videos
User Base	1 billion+	2 billion+ (Instagram)	2 billion+ (YouTube)	500 million+	2.9 billion+ (Facebook)
Content Discovery	Advanced algorithm, personalized feed	Algorithm-driven, tied to user interests	Strong suggestion engine, linked to YouTube history	Discover tab, user-generated content	Algorithm-based, linked to user interactions
Monetization Options	Creator Fund, brand partnerships, in-app purchases	IGTV ads, brand collaborations, affiliate marketing	Ads, Super Chat, channel memberships	Limited, primarily ad revenue	Ad breaks, brand partnerships, in-stream ads
Community Building	Strong community features, follower interaction	Integrated with Instagram's existing community features	Strong community tools from YouTube, live chat	Community through snap streaks, stories	Integrated with Facebook Groups and Pages
Engagement Features	Likes, comments, shares, duets, live streaming	Likes, comments, shares, stories, live streaming	Likes, comments, shares, stories, live streaming	Likes, comments, shares, snaps, stories	Likes, comments, shares, stories, live streaming
Analytics	In-depth analytics for creators	Basic to advanced insights through Instagram Insights	Comprehensive analytics through YouTube Studio	Basic analytics, limited insights	Advanced analytics via Facebook Insights

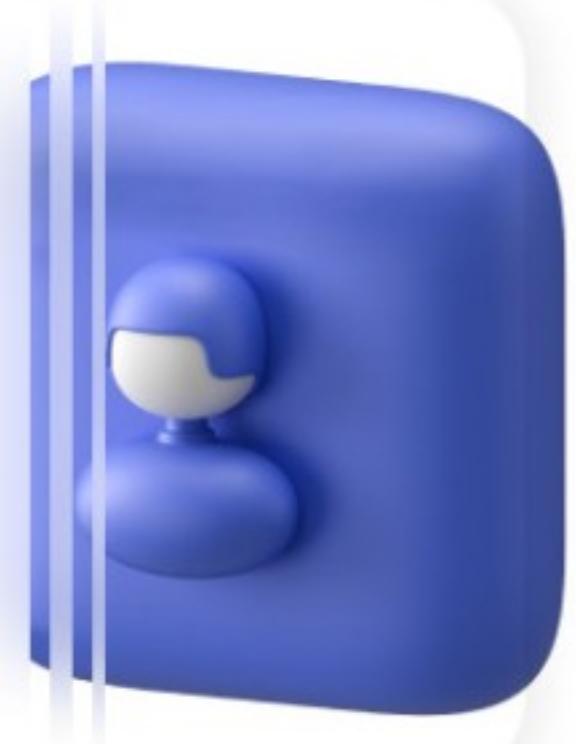
Popularity of Short Video Content Format

Background

Dopamine Rush

Our obsession with short video apps is due to the brain's reward system. Any emotion triggers this dopamine release, making us feel good. This pleasurable sensation keeps us coming back for more.

[Columbia Science Review](#)



Goals

Instant Gratification

Short video apps offer instant gratification, a concept deeply rooted in human psychology. The ability to quickly scroll through a myriad of videos provides immediate satisfaction.

[ScienceDirect.com](#)

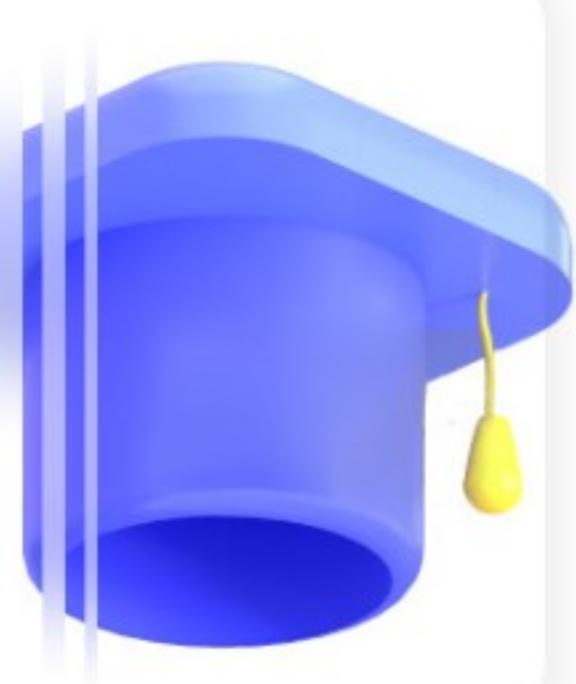


Needs

Algorithms

Advanced algorithms enhance the user experience by curating content feeds. Algorithms analyze user behavior and preferences to deliver a stream of videos tailored to individual tastes, ensuring that users are constantly engaged with content that resonates.

[ResearchGate](#)



Pain Points

Creators & Virality

Features such as augmented reality (AR) filters, special effects, and interactive challenges enhance creativity and engagement. Technological advancements make content creation accessible and fun.

[Cogitatio Press](#)



Wants

Recurring Use-cycle

The short content video applications want the users to keep using the app for the most amount of time per session without the conscience of time spent using the app.

[Frontiersin.org](#)



Fears

Feature Integration

Features such as augmented reality (AR) filters, special effects, and interactive challenges enhance creativity and engagement. Technological advancements make content creation accessible and fun.

[ScienceDirect.com](#)

Why are short video content apps successful?

Partners

1. Music labels for vast libraries.
2. Influencers who amplify reach.
3. Technology partners ensuring seamless performance.
4. Advertisers driving monetization.

[Influencer Marketing Hub](#)



Activities

1. Innovating with user-centric features.
2. Moderating content to create a safe space.
3. Engaging users with trends and challenges.
4. Researching and developing for future growth.

[Researchgate](#)



Channels

1. Mobile applications across iOS and Android.
2. Web platform for broader access.
3. Integrations with other social media.

[Influencer Marketing Hub](#)



Expenditure

1. Investing in infrastructure and technology.
2. Acquiring content and licensing.
3. Marketing to expand reach.
4. Research and development for continuous innovation.

[Wikipedia](#)



Resources

1. High-quality infrastructure and servers.
2. Diverse and vast music and effect libraries.
3. Engaged and active community.
4. Advanced algorithms for personalized feeds.

[Technology.org](#)



Competitor Analysis

Feature	TikTok	Reels	Shorts	Spotlight	facebook videos
Must Have Features					
Easy Upload & Editing Tools	Yes	Yes	Yes	Yes	Yes
Customizable Music	Yes	Yes	Yes	Yes	Yes
Video Filters & Effects	Yes	Yes	Yes	Yes	Yes
Hashtags & Trends Integration	Yes	Yes	Yes	Yes	Yes
User Profile Customization	Yes	Yes	Yes	Yes	Yes
Commenting & Interaction	Yes	Yes	Yes	Yes	Yes
Sharing Options	Yes	Yes	Yes	Yes	Yes
Nice to Have Features					
Analytics & Insights	Yes	Yes	No	Yes	Yes
Collaboration Videos	Yes	Yes	Yes	No	No
Live Streaming	Yes	Yes	No	Yes	Yes
Monetization for Creators	Yes	Yes	Yes	No	Yes
Scheduled Posting	Yes	Yes	Yes	No	Yes
Augmented Reality Features	Yes	Yes	No	Yes	Yes
In-app Challenges	Yes	Yes	Yes	Yes	No
Integration with E-commerce	Yes	Yes	No	No	Yes
Story Integration	No	Yes	No	Yes	Yes
Delighters					
Advanced AI Personalization	Yes	Yes	Yes	Yes	Yes
Community & Creator Support	Yes	Yes	Yes	Yes	Yes
Immersive Full-Screen Viewing	Yes	Yes	Yes	Yes	Yes
Cross-Platform Sharing	Yes	Yes	Yes	Yes	Yes
Music Library Integration	Yes	Yes	Yes	Yes	Yes
In-depth Learning Resources	Yes	Yes	Yes	No	Yes
VR/360° Video Support	No	No	No	No	Yes
Adaptive Video Quality	Yes	Yes	Yes	Yes	Yes

Define

Improvement Opportunities

Niche

Focus on niche demographics or underserved markets.



Control

Improve content discovery with more user control over feed customization.



Community

Foster stronger community features such as group interactions or fan clubs.



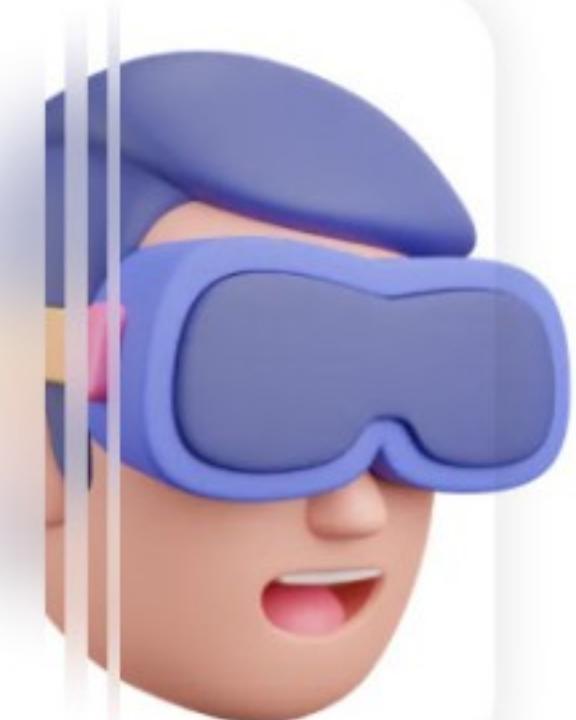
Tools

Enhance editing tools with advanced features & easier interface for users.



Interactions

Develop unique engagement features such as interactive tools.



Analytics

Provide more detailed & accessible analytics to help creators optimize content.



Improvement Opportunities

Specificity

Current short video apps do not offer specific on-demand practical learning content.



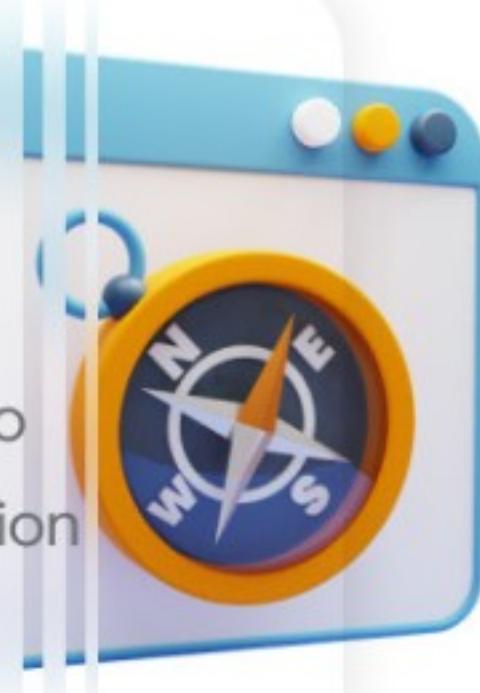
Immersive

Platforms lack a focus on educational content, particularly in innovative formats like 3D and VR.



Navigation

Users cannot find specific content on current short video apps due to poor categorization and search functionalities.



Credibility

Users doubt the credibility of learning content on current social media platforms, that prioritize viral trends over factual accuracy.



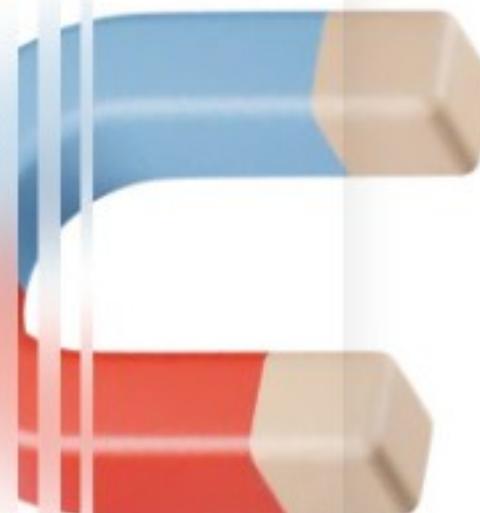
Parental Control

Current platforms do not provide adequate tools for parents to monitor and control their children's exposure to educational content.



Retention

Social media platforms do not integrate interactive learning elements that can enhance engagement and retention of educational material.



Empathize



User Persona

Janera Moore

Janera is a happy-go-lucky sophomore student. She is a quiet reader, she likes both academic and leisure reading topics. She occasionally takes walks in between her study sessions. She is exploring her career aspects but is unsure of what the right track for her. She is an occasional social media user and is against spending a lot of time on it. She developed a habit of going to the gym considerably often as a goal.

About

Pronouns	she/they
Age	19
Education	High school Student
Interest	Lacrosse

Skills

Internet	★★★★★
Programs	★★★★★
Social networks	★★★★★
Communication	★★★★★

BEHAVIOURS

- Likes the occasional social media scrolling to learn something new.
- She wants to learn something new everyday whilst being comfortable in her own space,

GOALS

- She is exploring her career aspects and wants to consider every possible track.
- She would like to avoid the time scrolling social media but likes the idea of learning on the go.

NEEDS

- A platform to go explore the variety of careers she eventually have to make a decision upon.
- A streamlined flow of productive videos that help her learning something new everyday.

EXPERIENCES

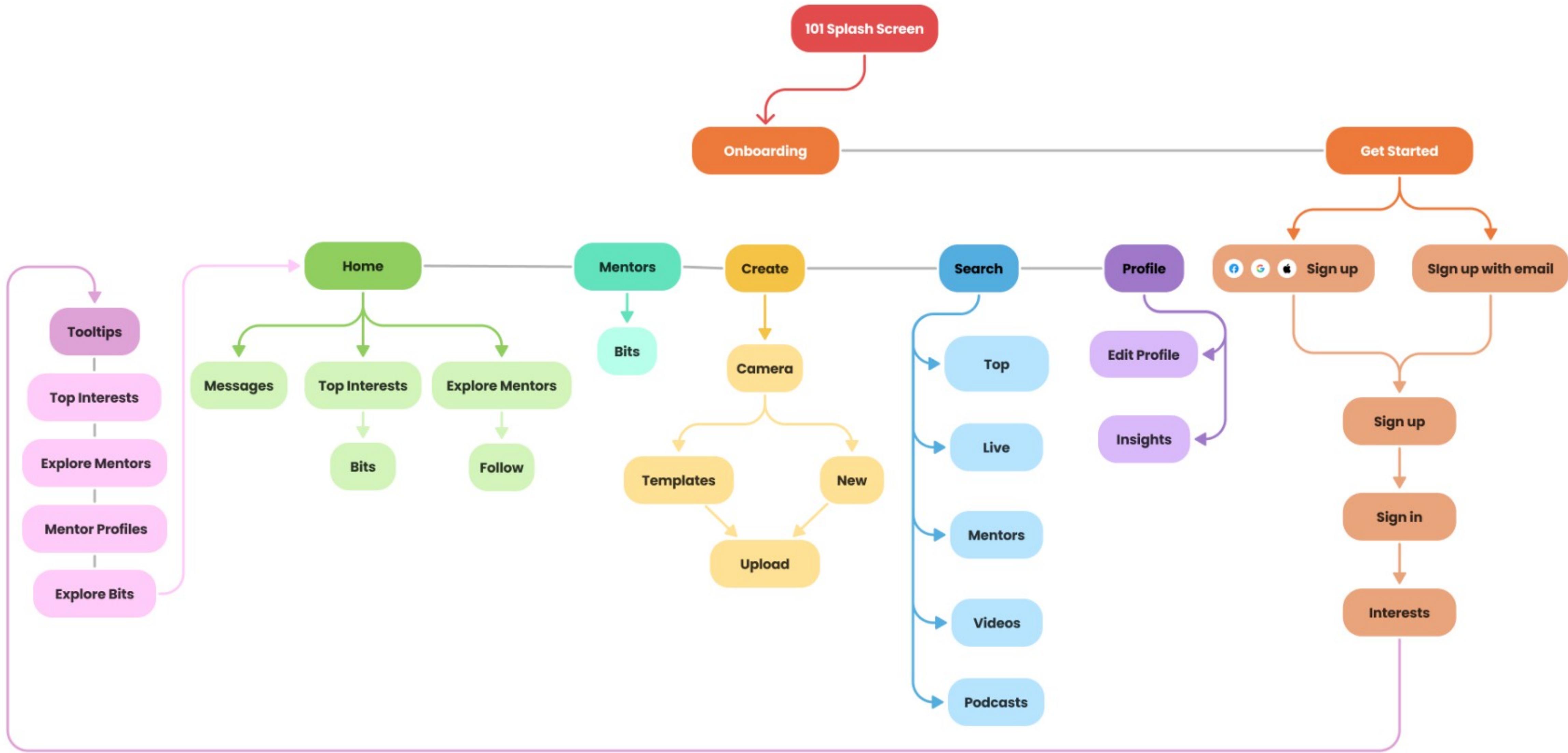
- Janera had a unpleasant experience of variety of topics of videos when it comes to social media.
- She has a lot of ambition and does not want social media to distract her.

Moodboard

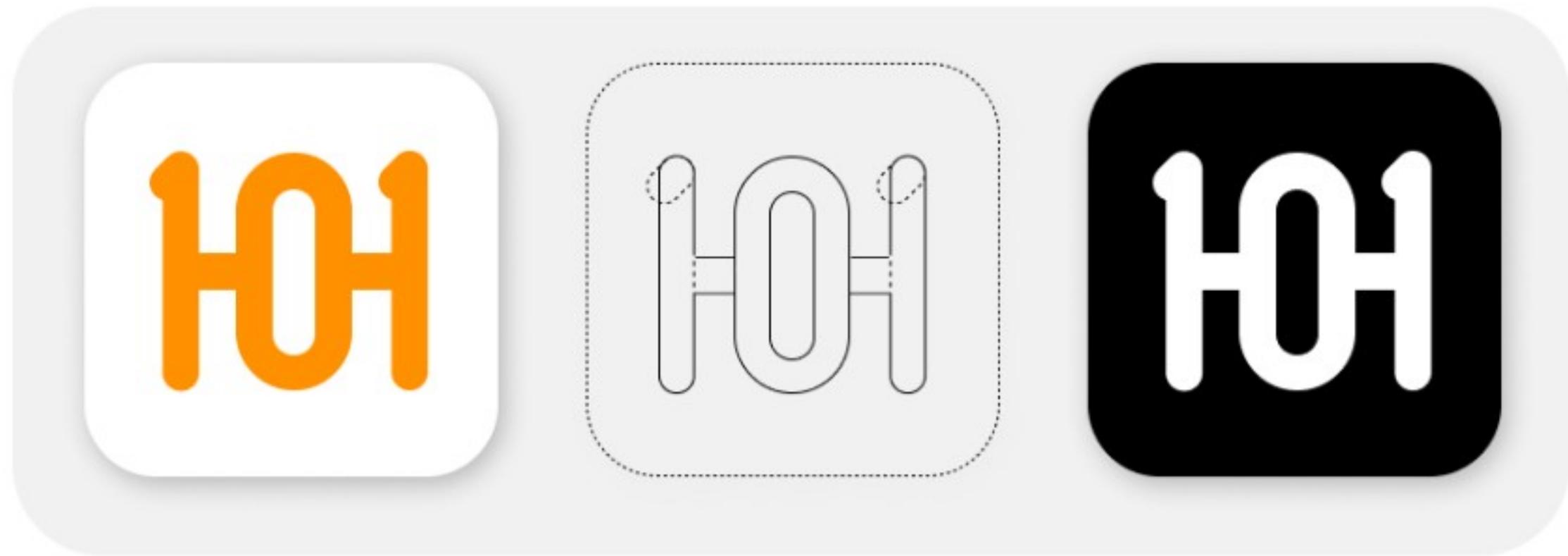


Deliver

Information Architecture



Branding



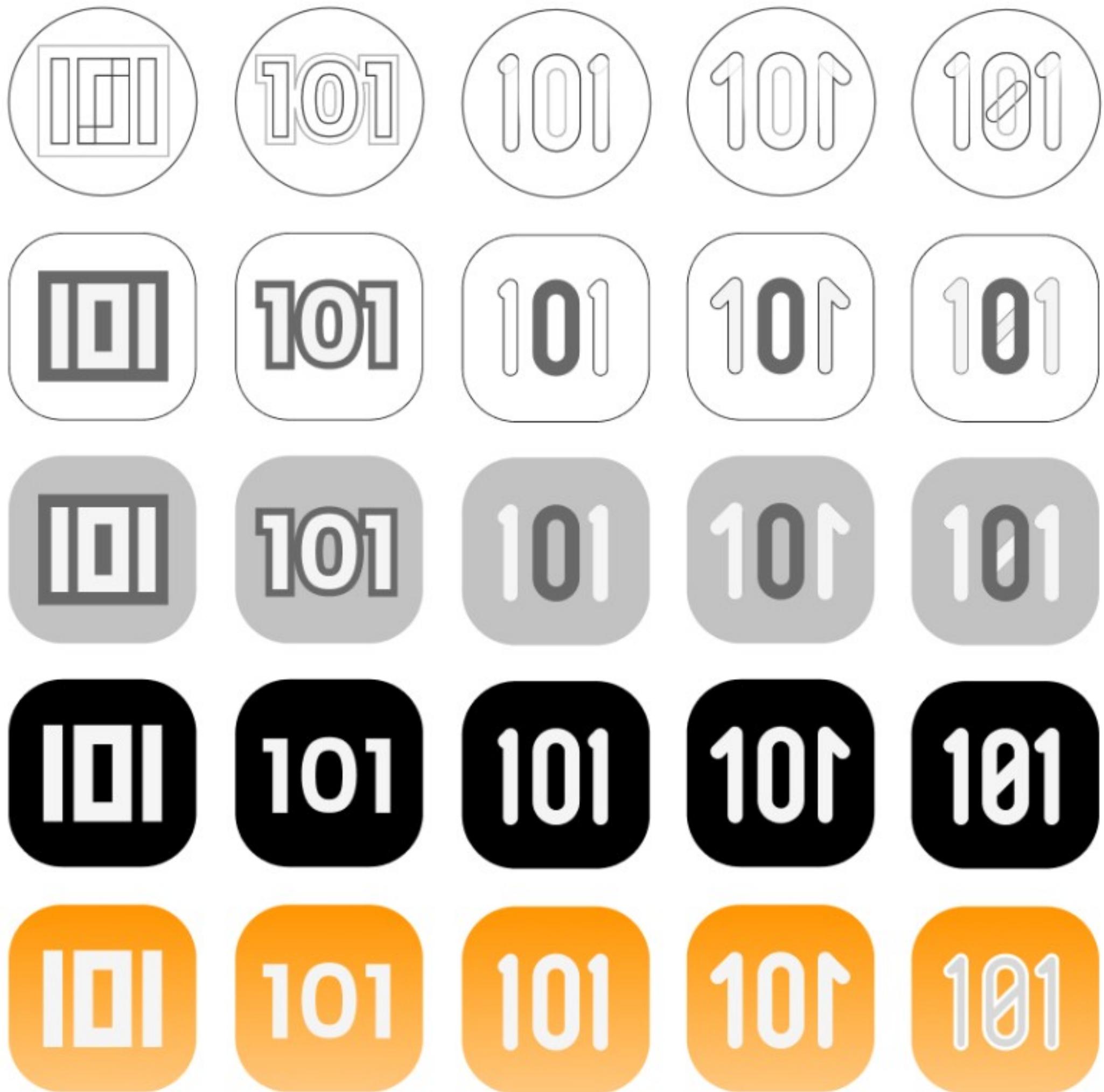
Optimistic

- Youthful ● Intellectual

one · oh · one

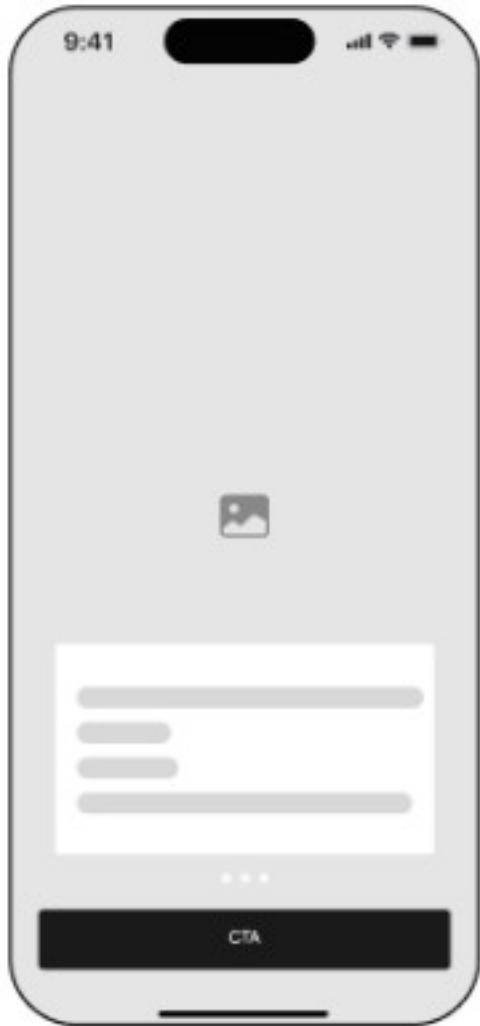
a slang sense referring to basic knowledge of a topic or a collection of introductory materials to a topic.

Explore your interests in one oh one place.



Low-Fidelity Prototype

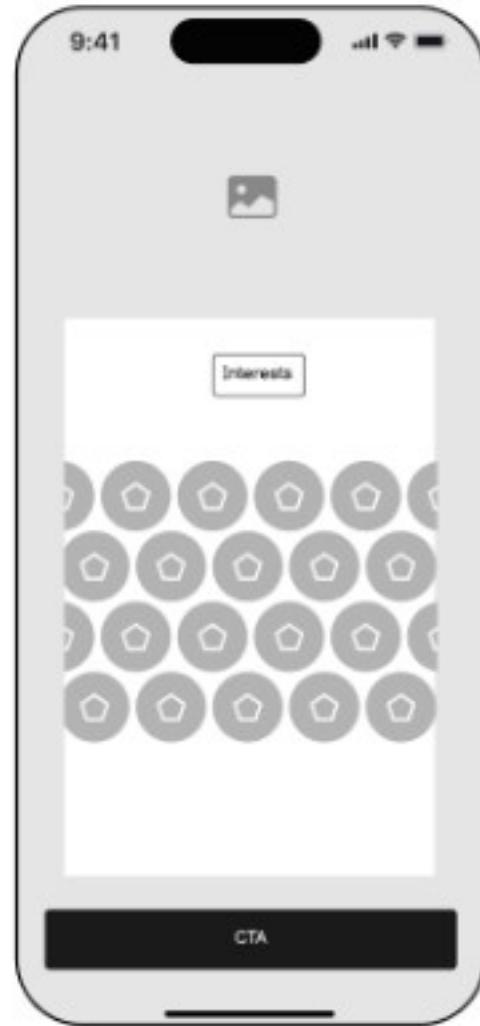
Welcome



Onboarding



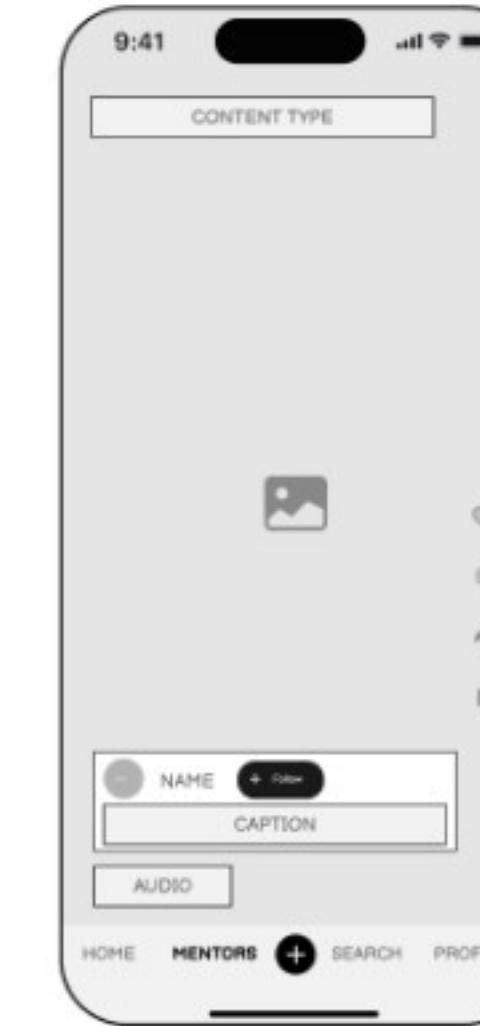
Choose interests



Home



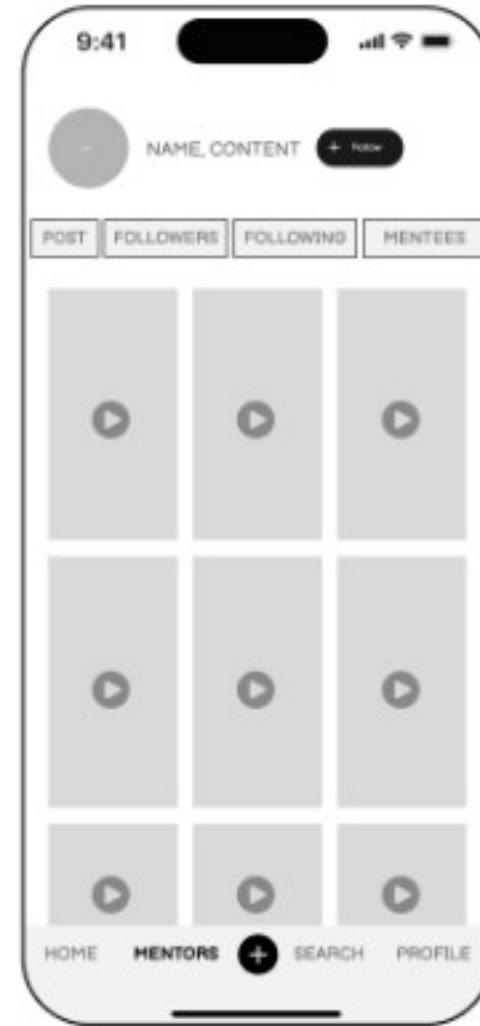
Bits



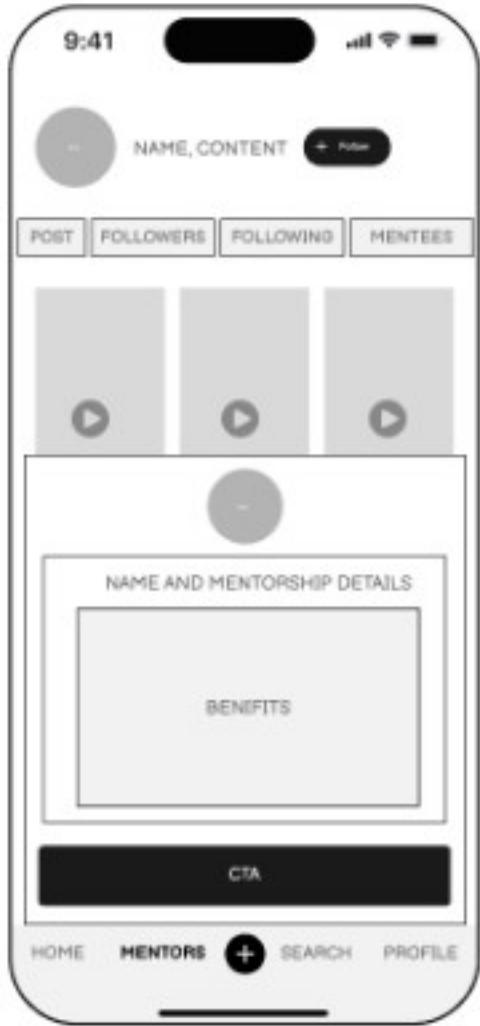
Comments



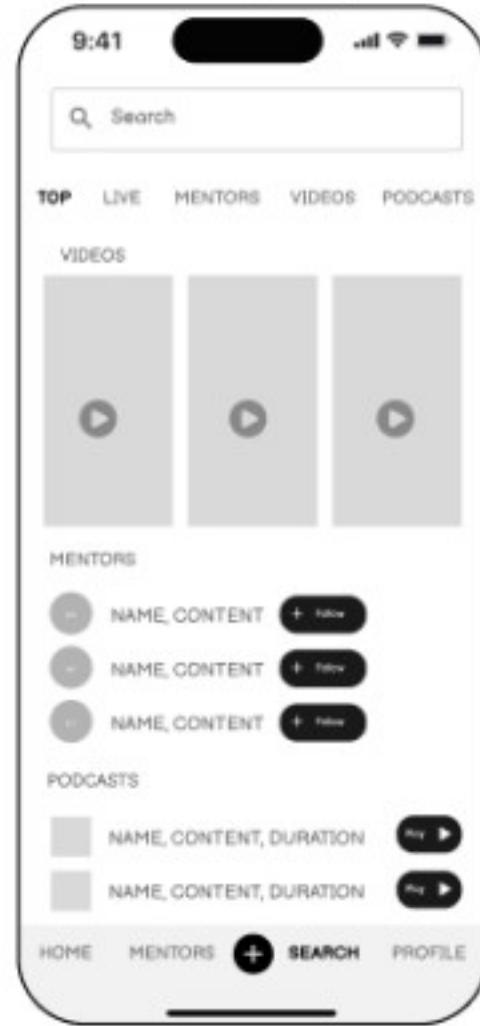
Mentor Profile



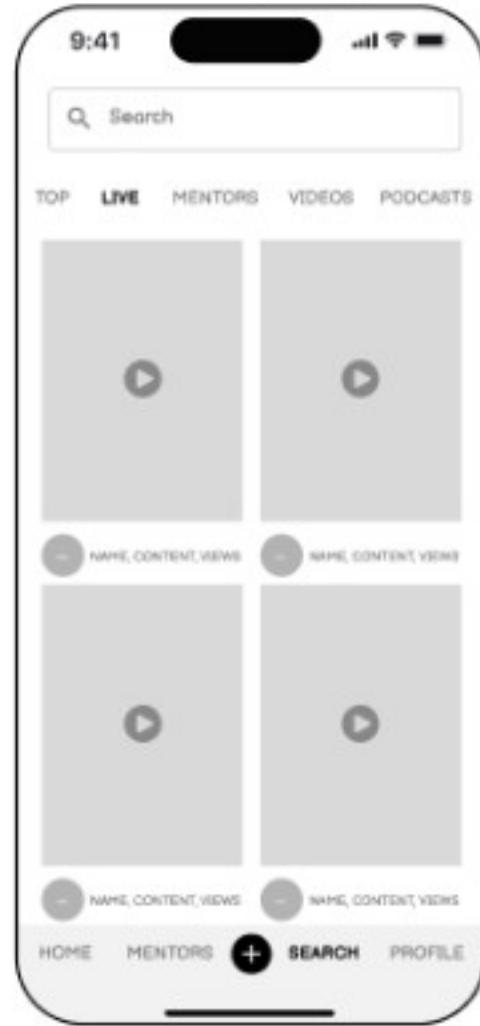
Mentorship



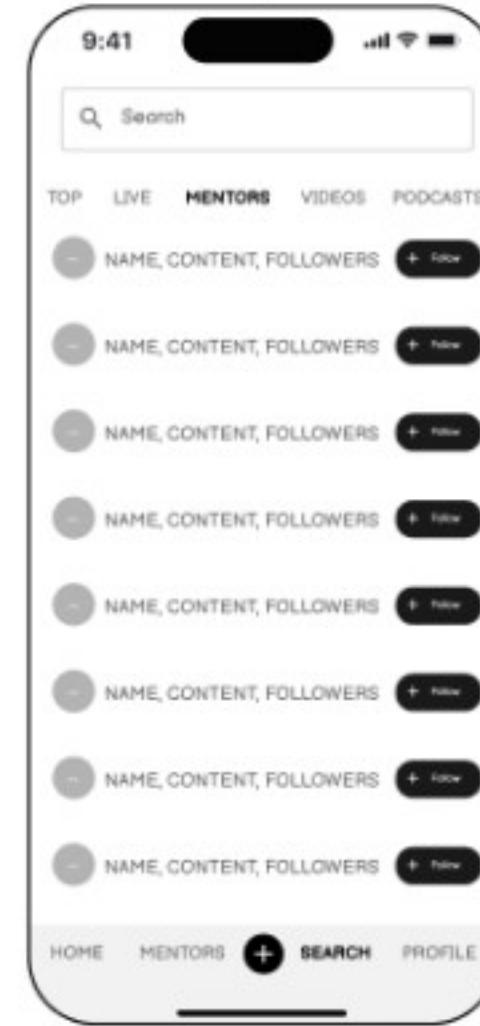
Search (Top)



Search (Live)



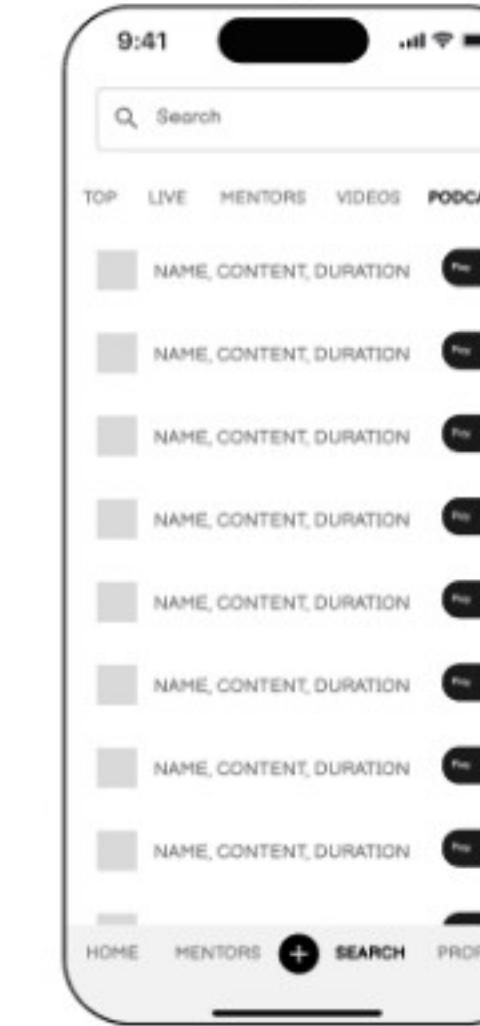
Search (Mentors)



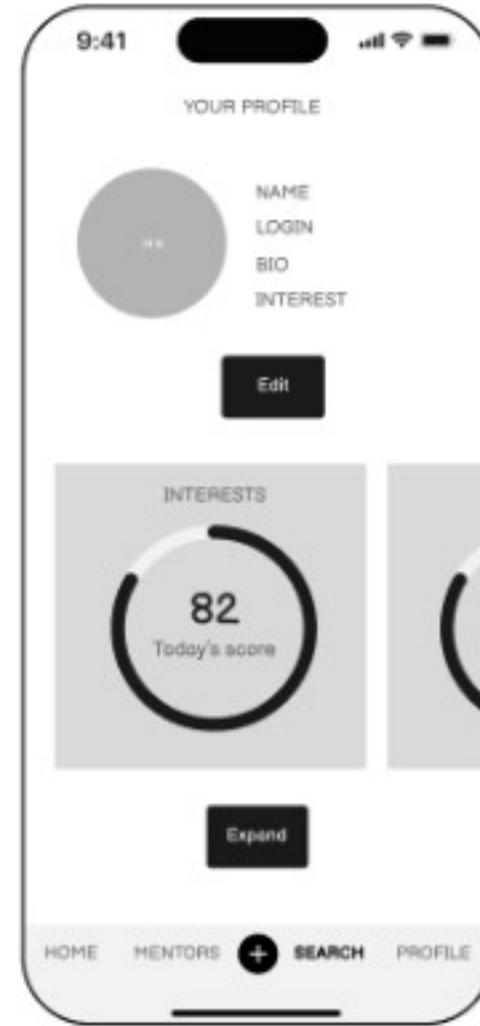
Search (Videos)



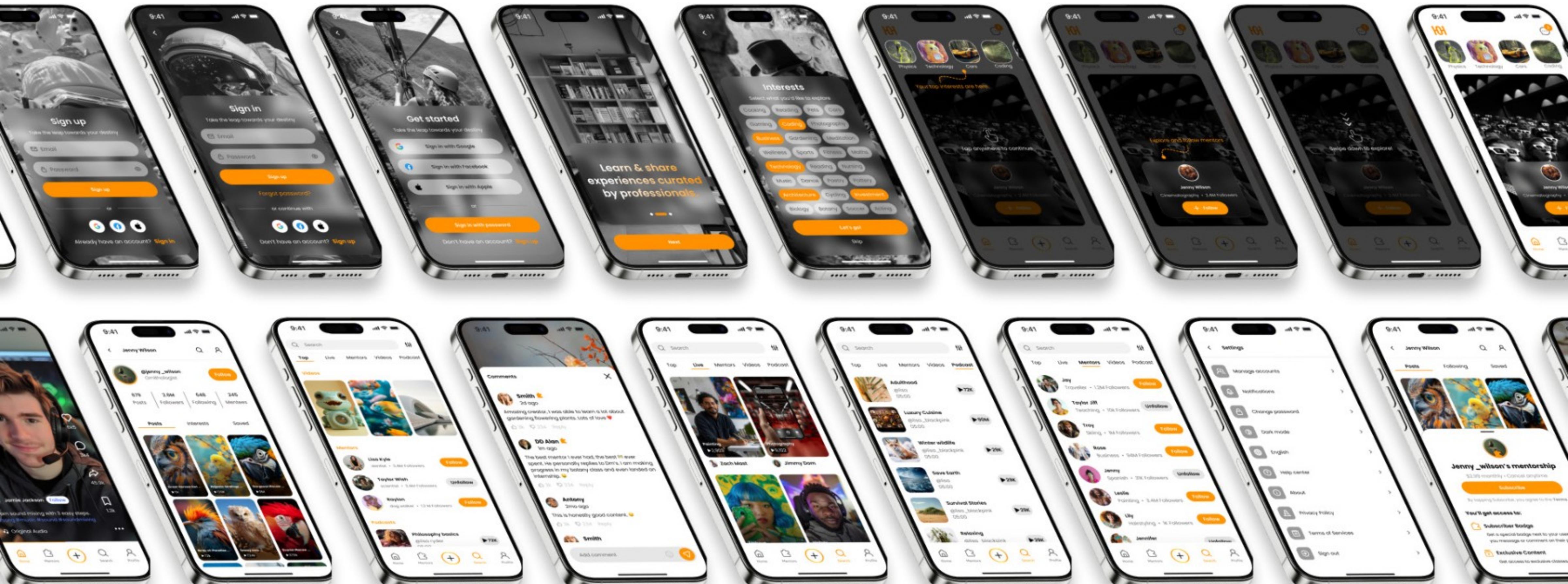
Search (Podcasts)



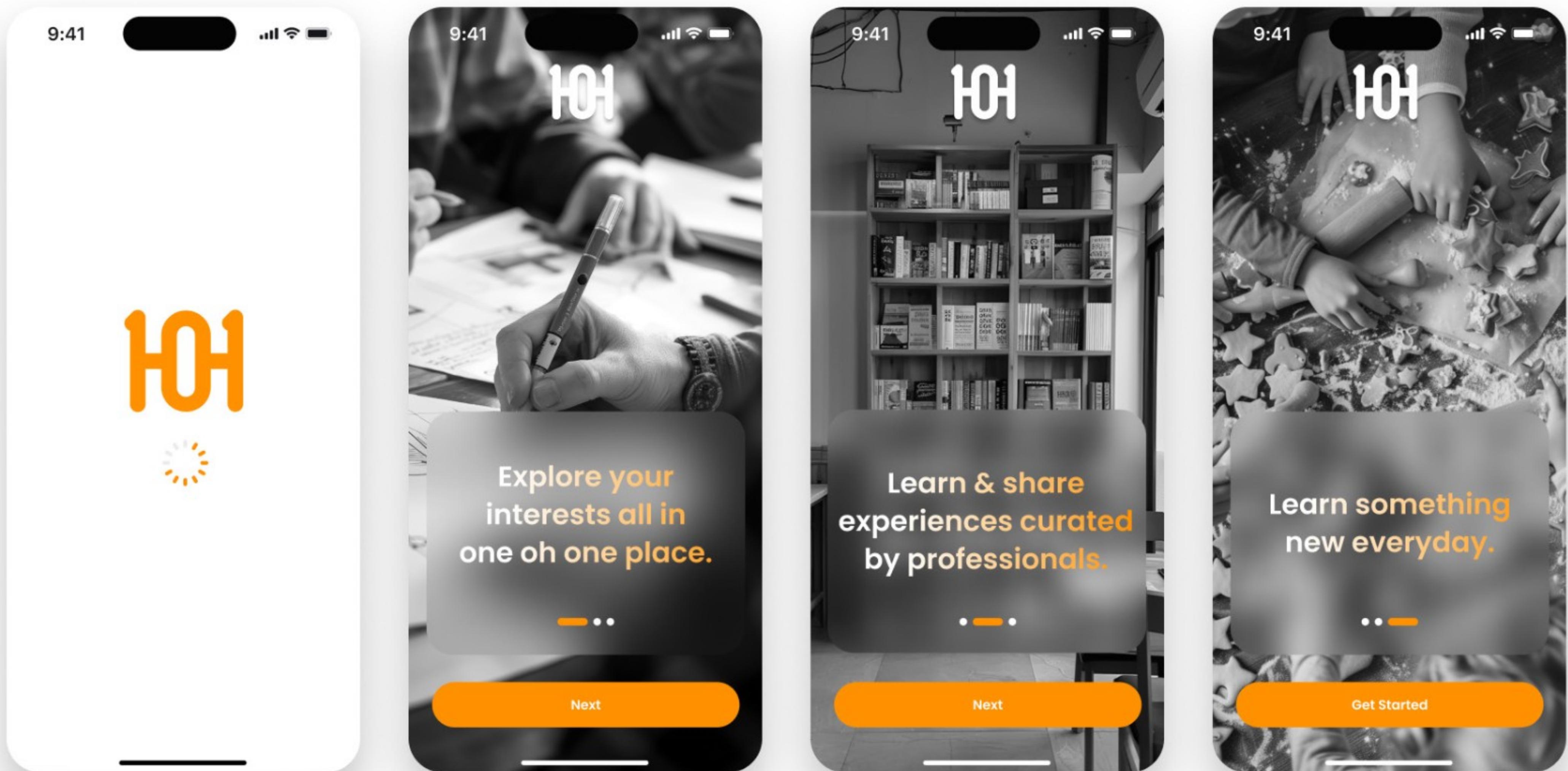
User Profile



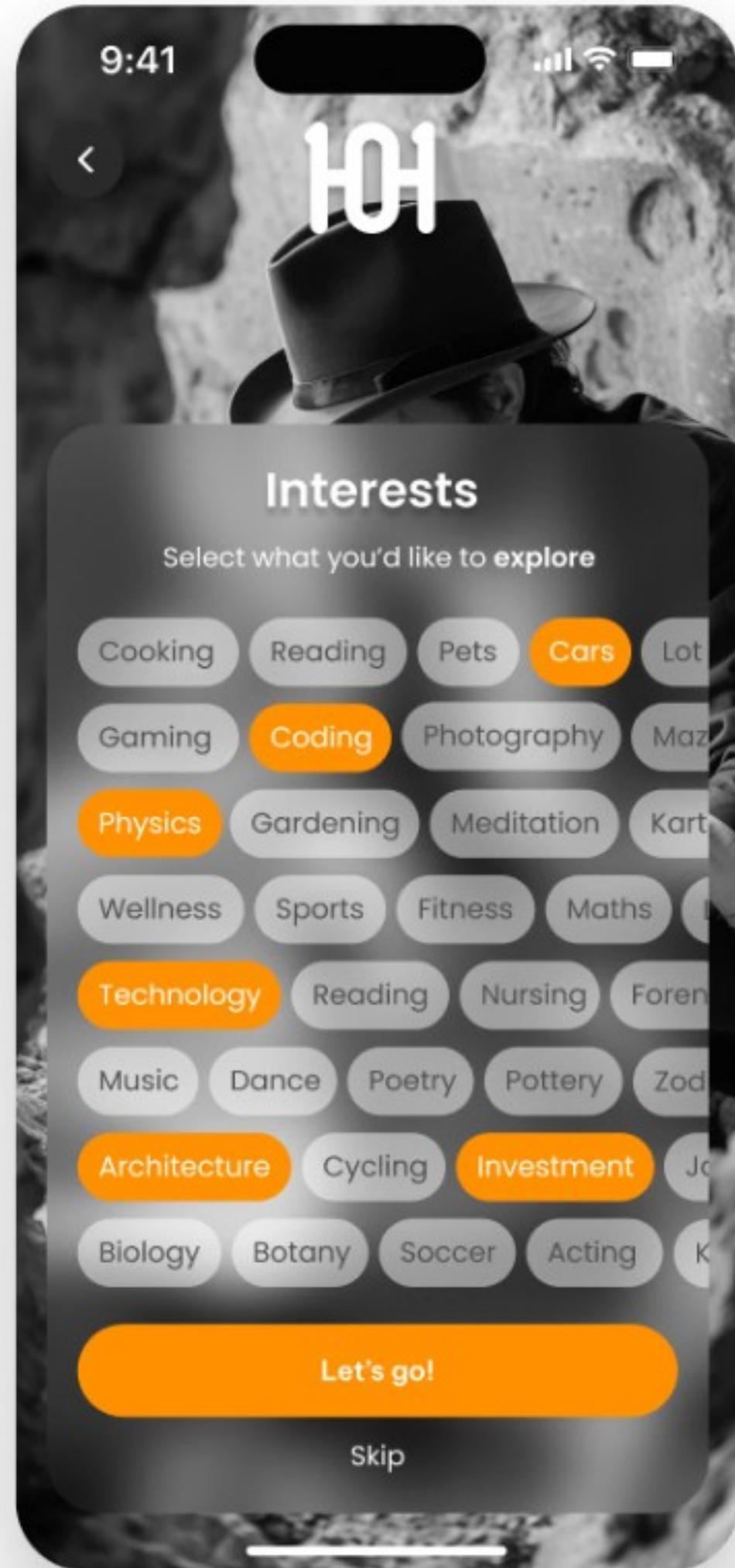
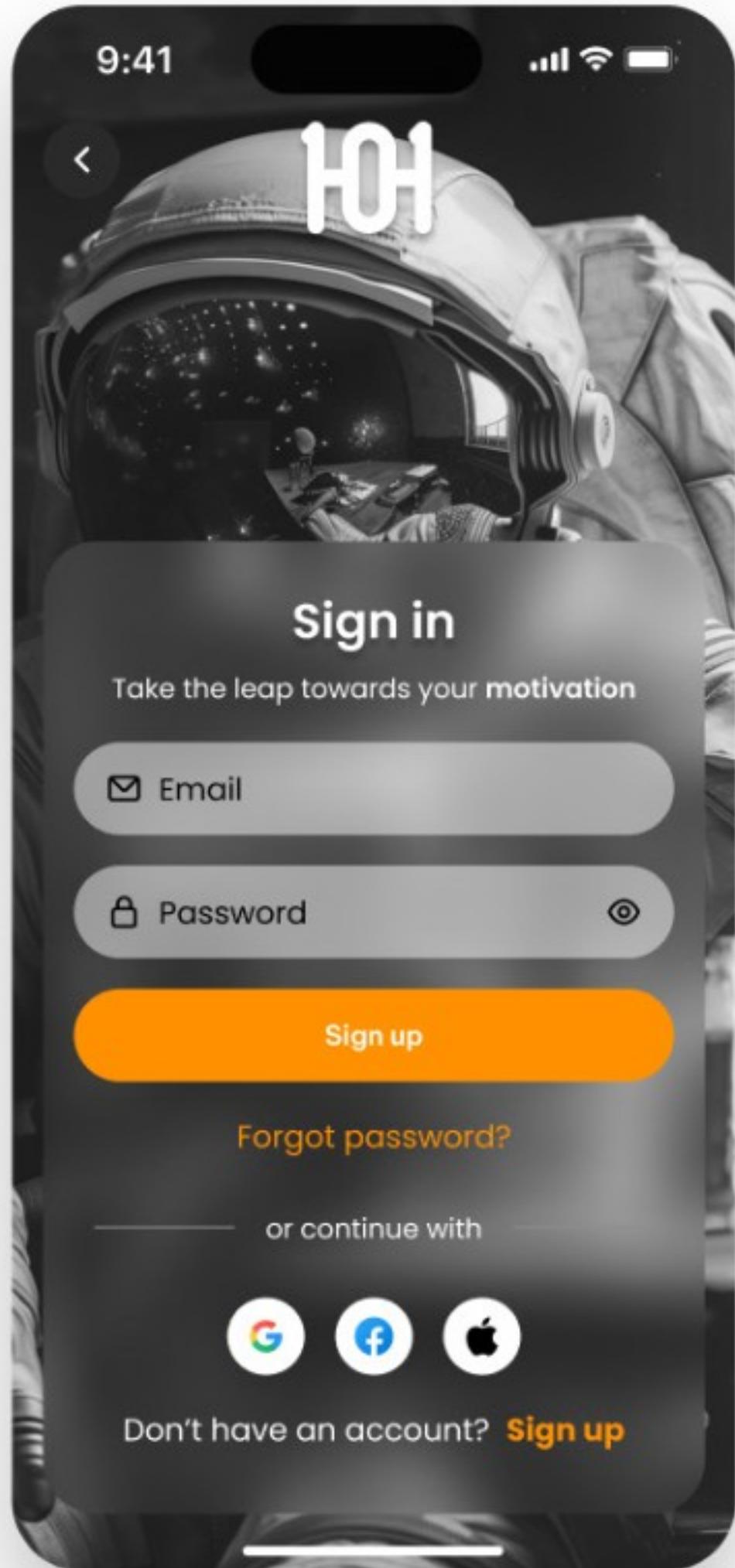
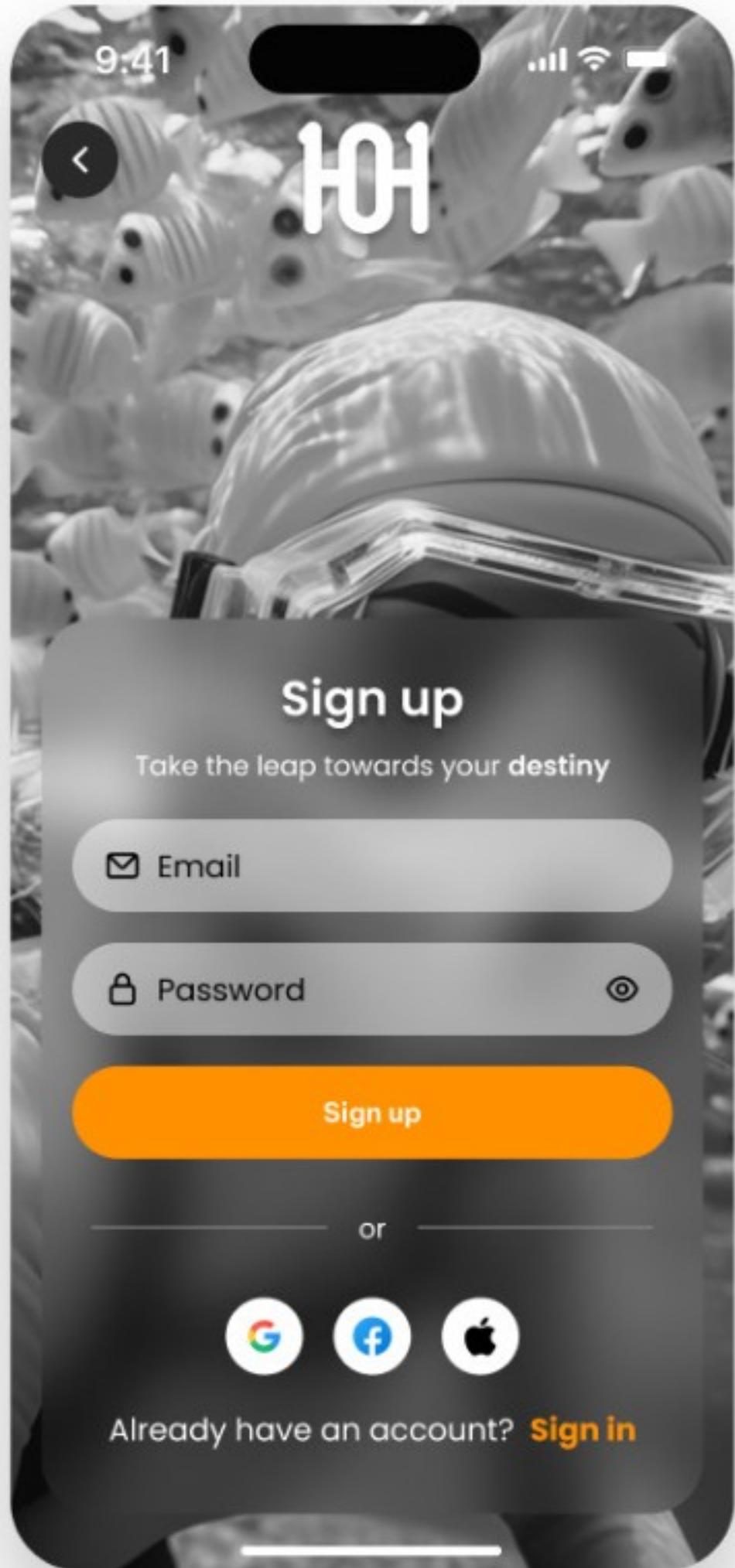
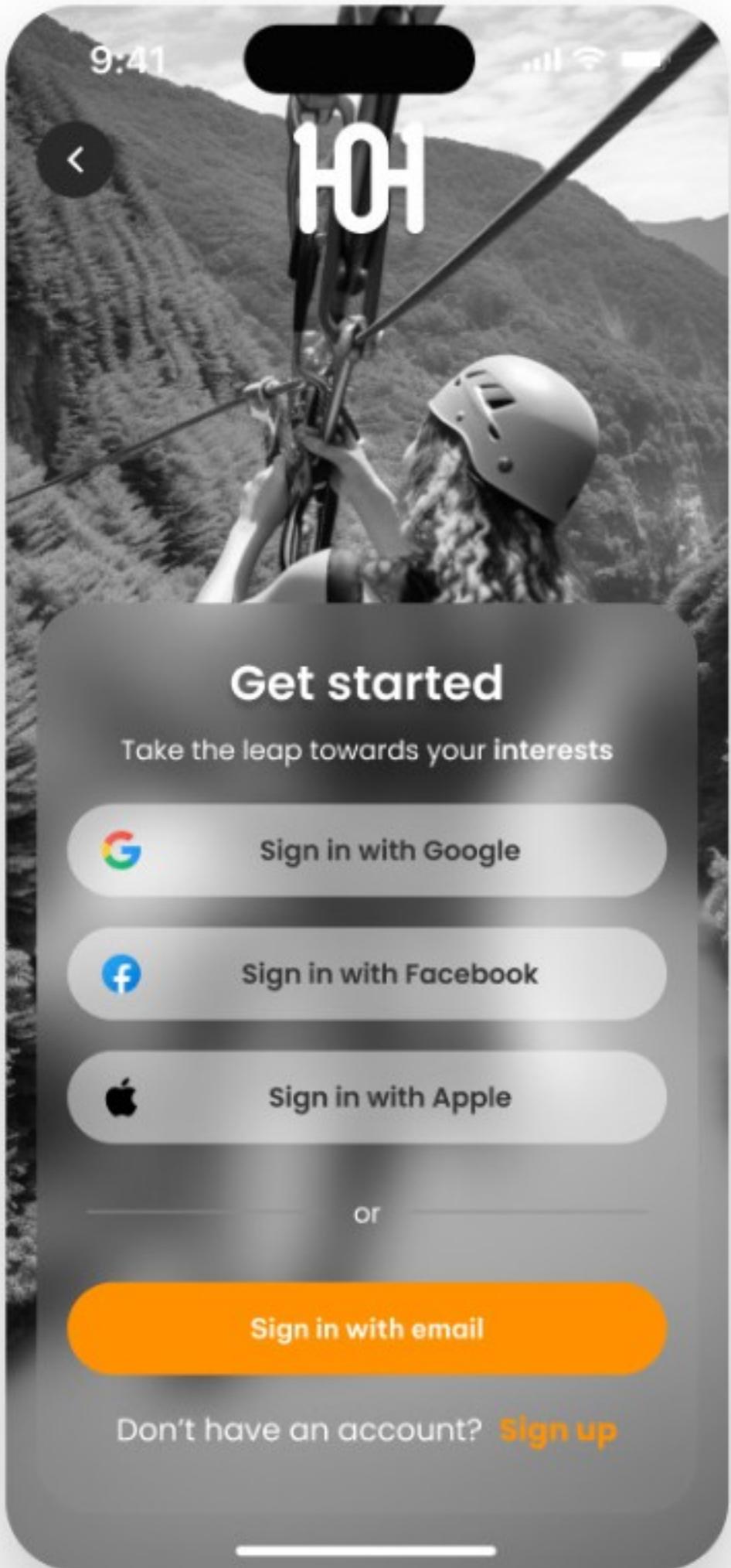
Screens



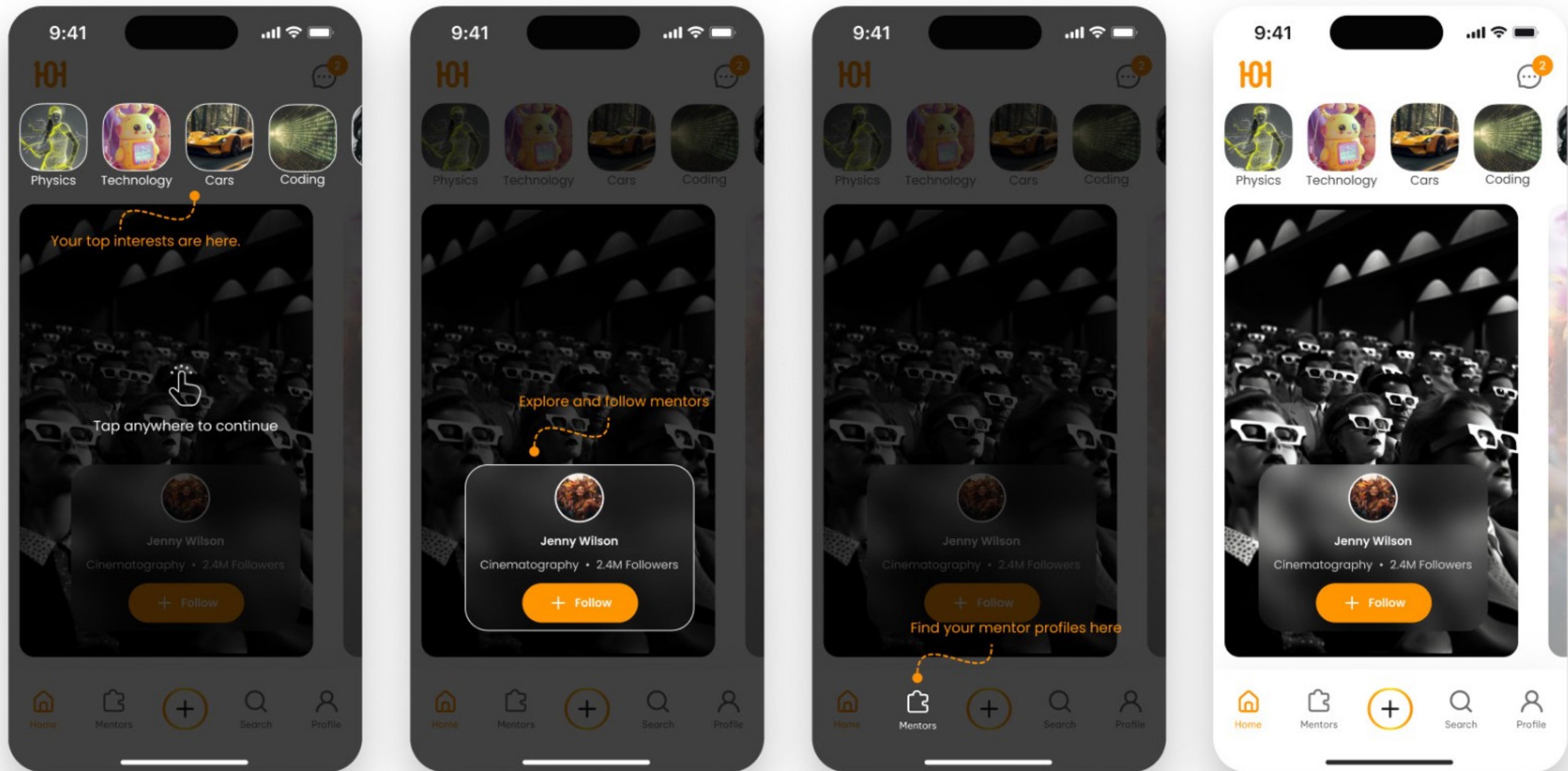
Getting Started



Onboarding



Interactive Tutorials

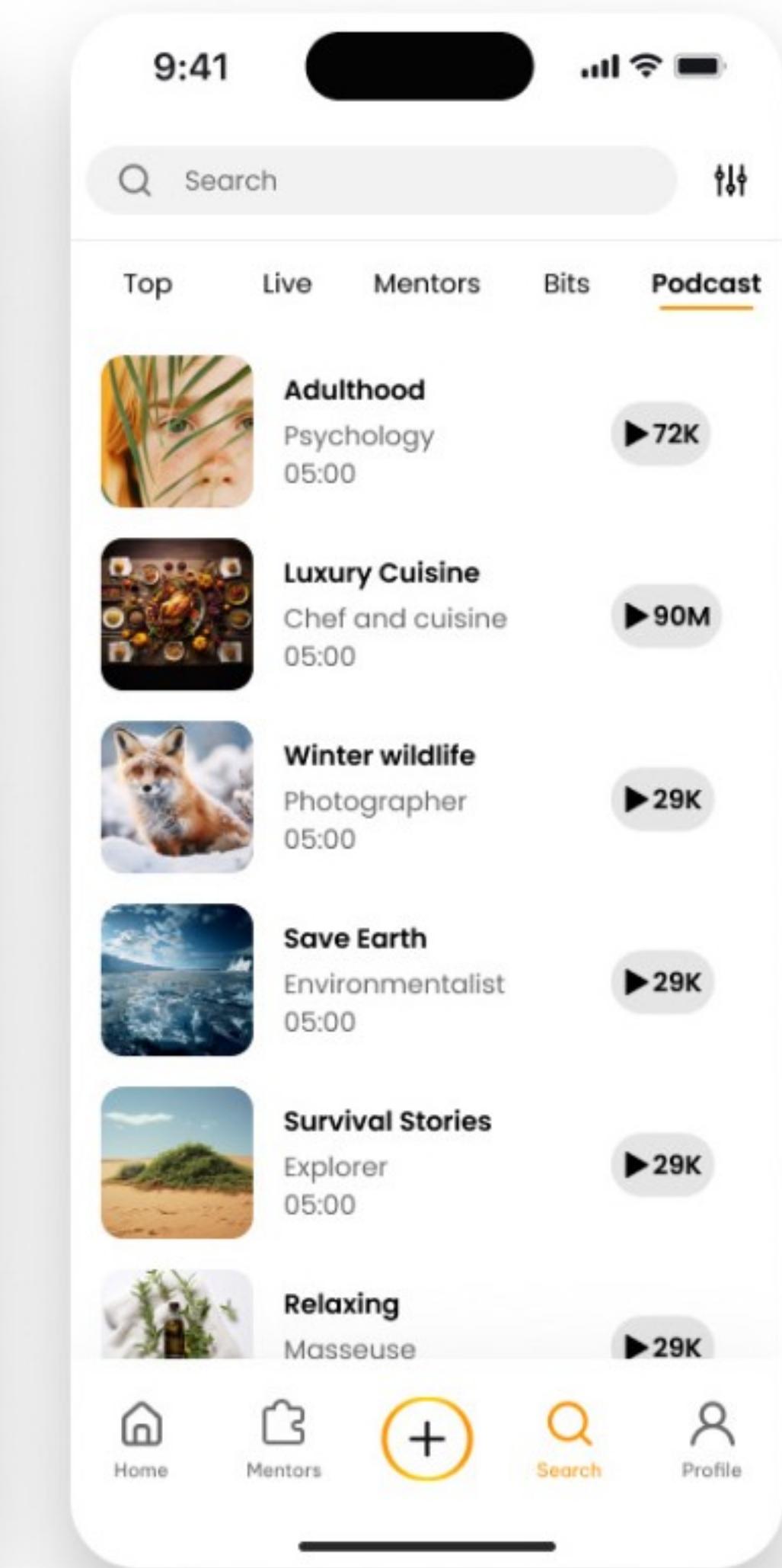
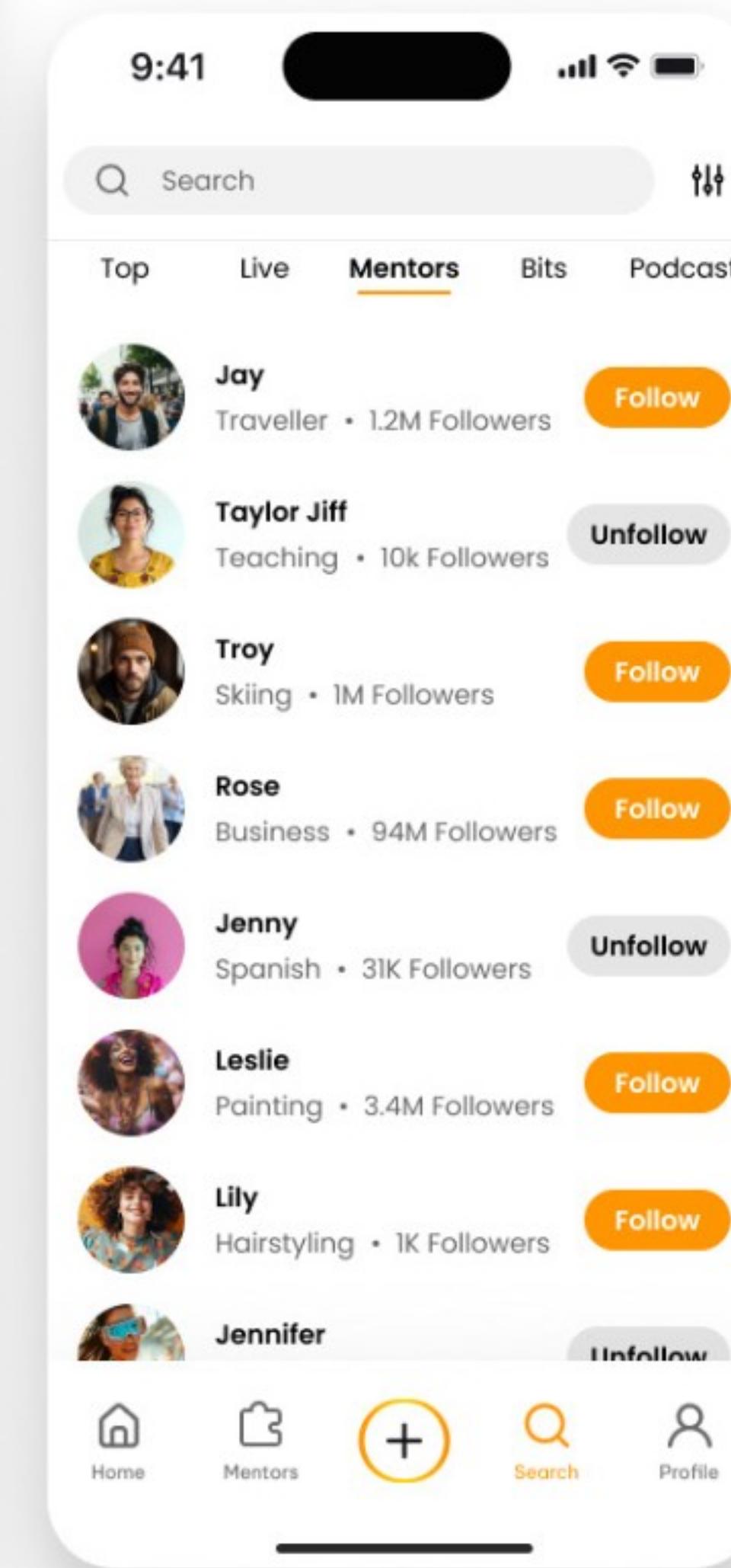
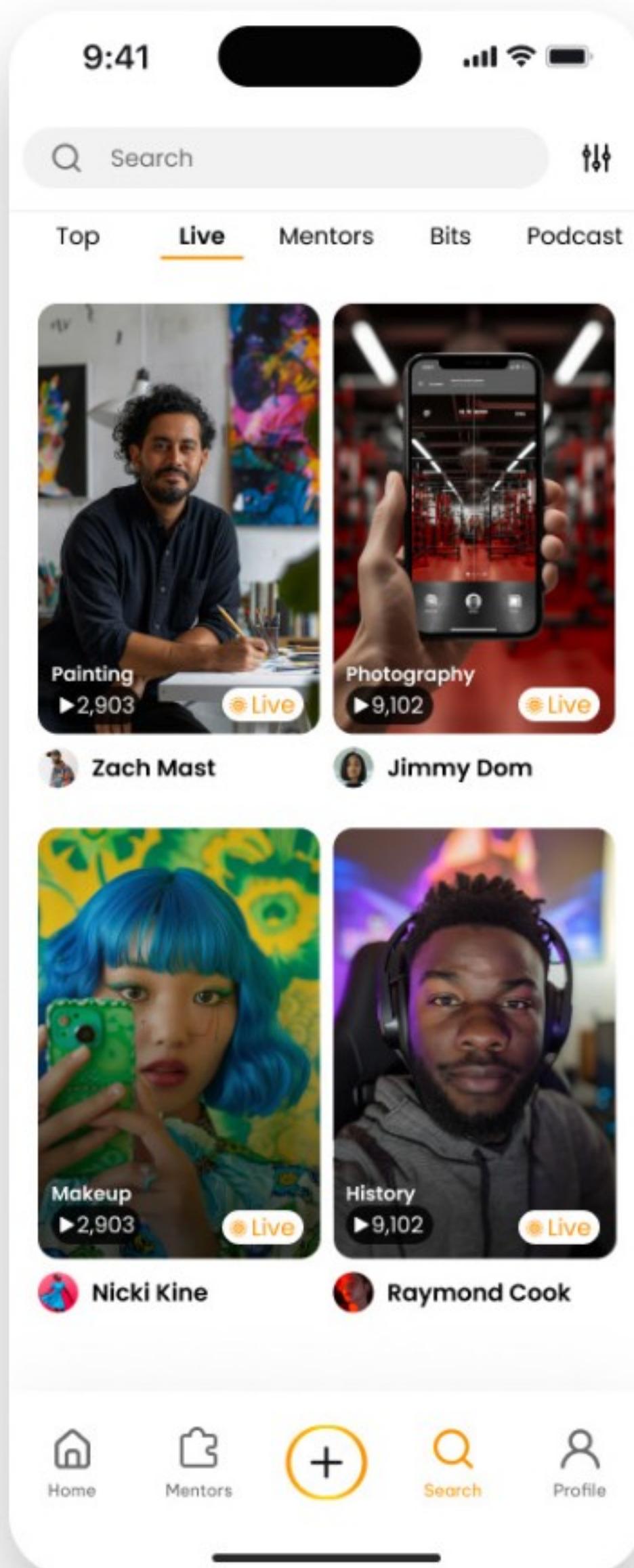
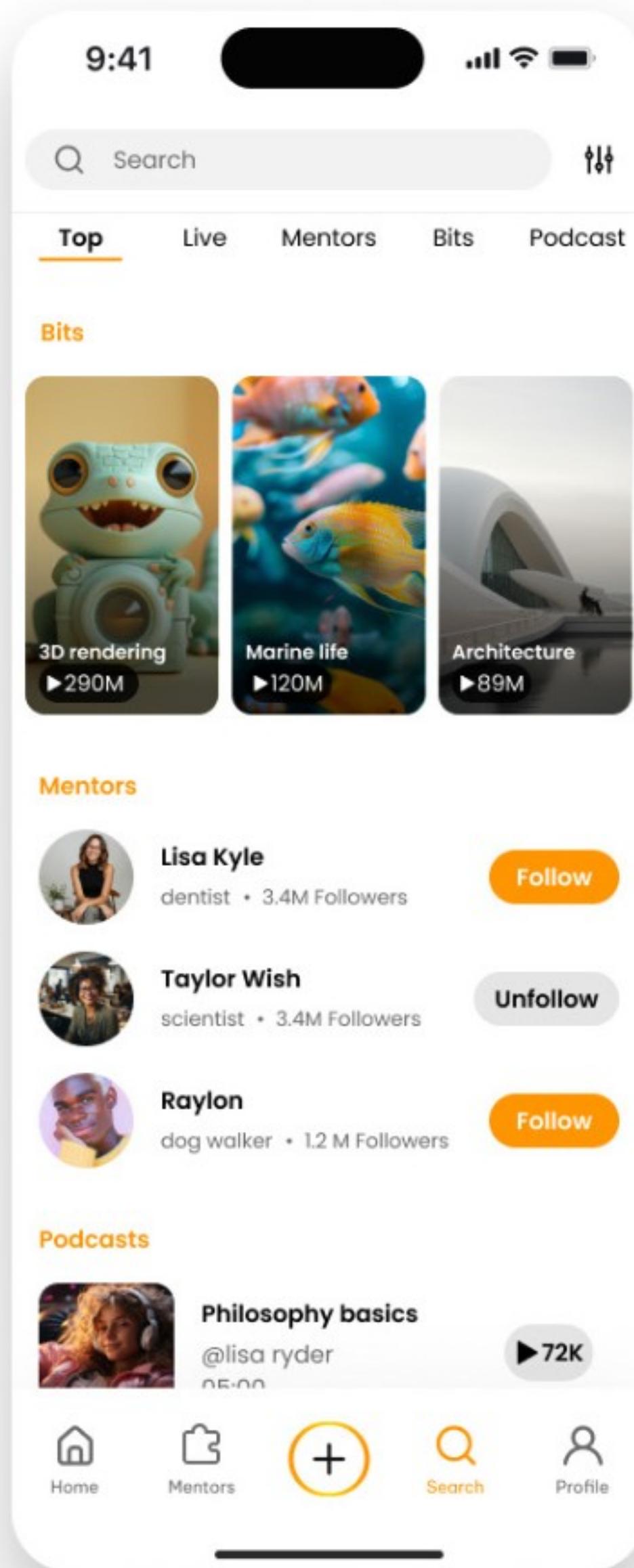


Feed

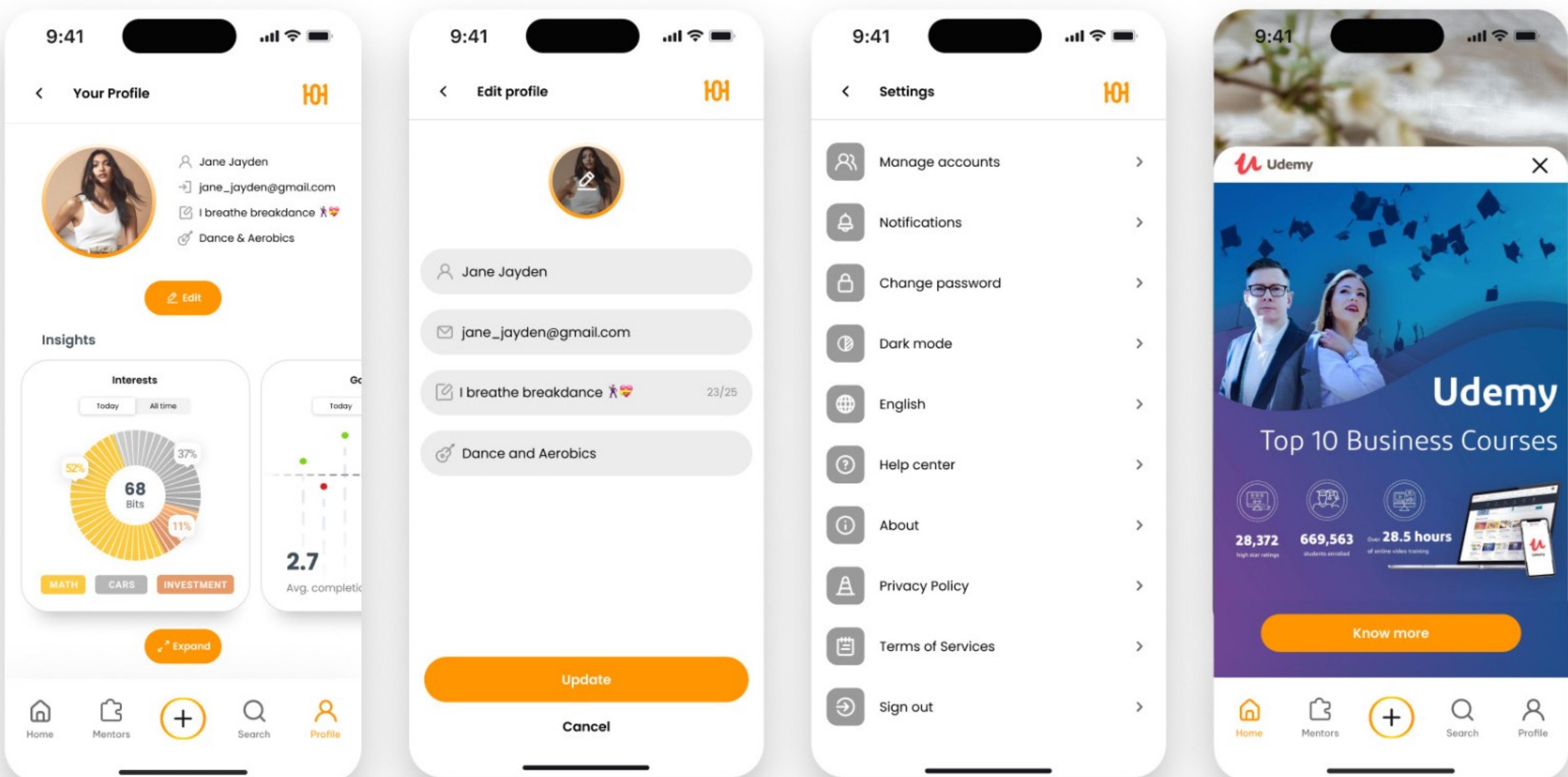
The image displays four screenshots of a mobile application interface, likely a social media or content sharing platform, arranged horizontally. Each screenshot shows a different section of the feed:

- Screenshot 1 (Left):** Shows a post by Jamie Jackson titled "Learn sound mixing with 3 easy steps." The post includes hashtags #song #music #sound #soundmixing and an "Original Audio" link. It has 6k5 likes, 3k4 comments, and 45.9k shares. The profile picture of Jamie Jackson is visible.
- Screenshot 2 (Second from Left):** Shows the "Comments" section for the same post. It displays three comments from users Smith, DD Alan, and Antony, each with their profile picture, timestamp, and a reply button. The background shows a blurred version of the original post.
- Screenshot 3 (Third from Left):** Shows the profile page of Jenny Wilson, an ornithologist (@jenny_wilson). It includes her bio, a profile picture, and statistics: 679 posts, 2.6M followers, 648 following, and 245 mentees. Below this are tabs for "Posts", "Interests", and "Saved", followed by a grid of six bird-related images.
- Screenshot 4 (Right):** Shows the "Mentorship" section for Jenny Wilson. It features a large image of her profile picture, a "Subscribe" button, and a price of \$2.99 monthly with a "Cancel anytime" option. It also includes a "Terms" link and a "You'll get access to:" section with two items: "Subscriber Badge" and "Exclusive Content".

Explore



Profile



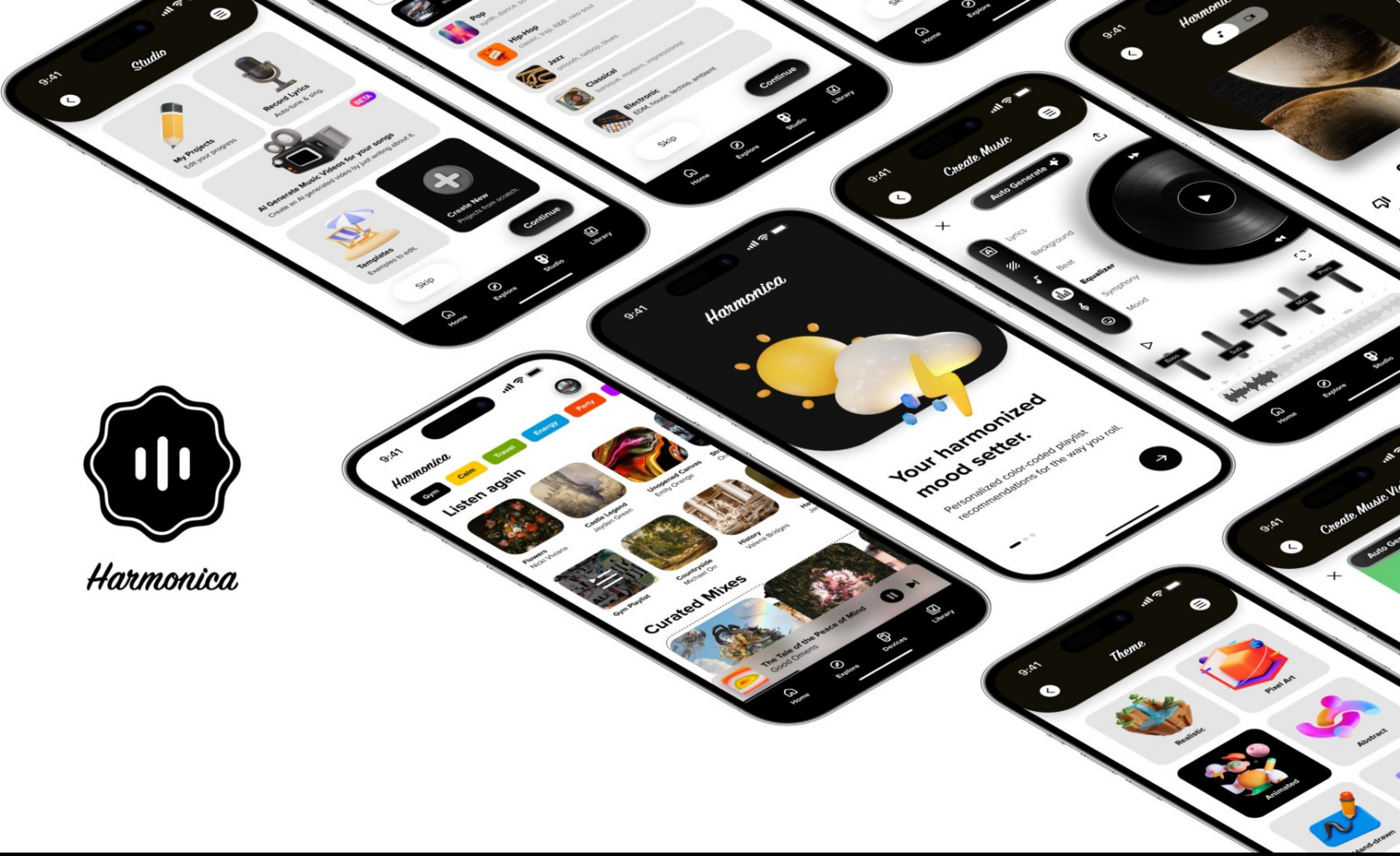




101



Harmonica



Discover

Discover

Features of Successful Music Apps

Local Content

Platforms like YouTube Music excel in blending global hits with region-specific content, catering to local tastes and demographics. This helps streaming services resonate with a broad audience while fostering loyalty among niche listeners. Spotify, Apple Music and Amazon Music also prioritize global accessibility, with tailored experiences for specific regions.

[BizzBuzz.news](https://www.buzzbuzz.news)



Device-Sync

Platforms like YouTube Music excel in blending global hits with region-specific content, catering to local tastes and demographics. This helps streaming services resonate with a broad audience while fostering loyalty among niche listeners.

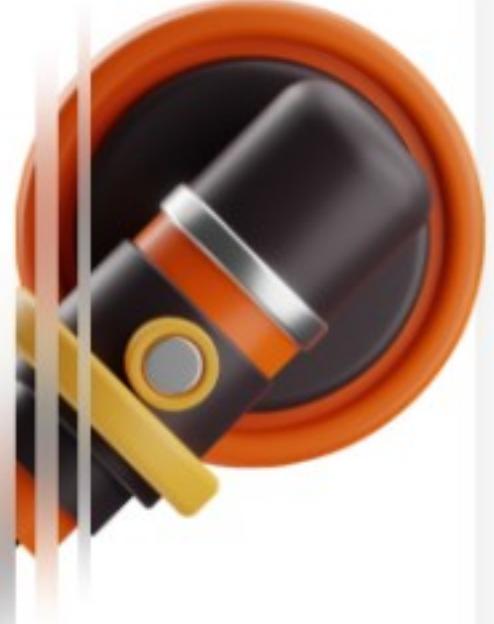
[Youtube.com](https://www.youtube.com)



Custom Create

The ability to upload custom content on YouTube Music empowers users, fostering creativity and social interaction. This participatory aspect strengthens the community and personal connection with the platform. Tidal's focus on artist exclusivity and early releases attracts fans of specific artists, enhancing its value proposition for loyal fanbases.

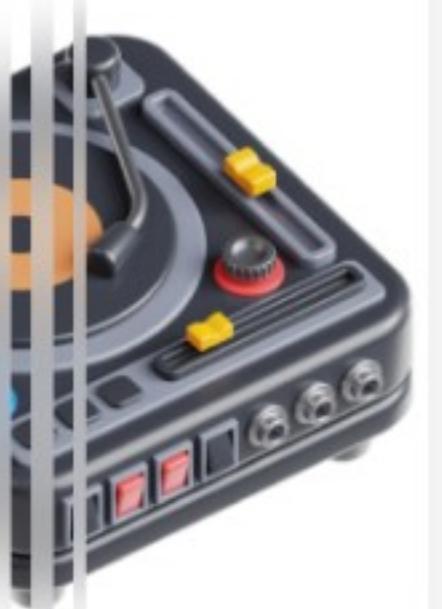
[Wikipedia](https://en.wikipedia.org)



Feature Rich

Advanced algorithms enhance the user experience by curating content feeds. Algorithms analyze user behavior and preferences to deliver a stream of videos tailored to individual tastes, ensuring that users are constantly engaged with content that resonates.

[ProgrammingInsider](https://www.programminginsider.com)



Audio Features

Special audio features in Apple Music make the experience one of a kind. While YouTube Music features extensive YouTube video library. While Spotify features extensive podcast library, Spotify Wrapped. While Tidal features a platform for budding musicians and vocalists to show their skills, making for a dedicated fanbase.

[Medium](https://medium.com)



Wearables & IoT

Platforms like Spotify and Apple Music are integrated with wearable devices like Apple Watch, Fitbit, and smart home devices. This seamless integration allows users to enjoy music during workouts or control playback through smart assistants, aligning with modern lifestyles.

[Spotify](https://www.spotify.com)



Spotify as a Market Leader

Distribution

Nov 2024 Worldwide

Europe	28%
Latin America	22%
North America	18%
Rest world	32%

[Demandsage](#)



Total Visits

Nov 2024 Worldwide

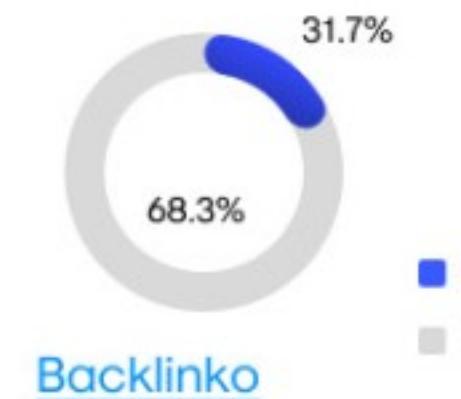
640 Million

[Statista](#)



Market Share

Nov 2024 Worldwide

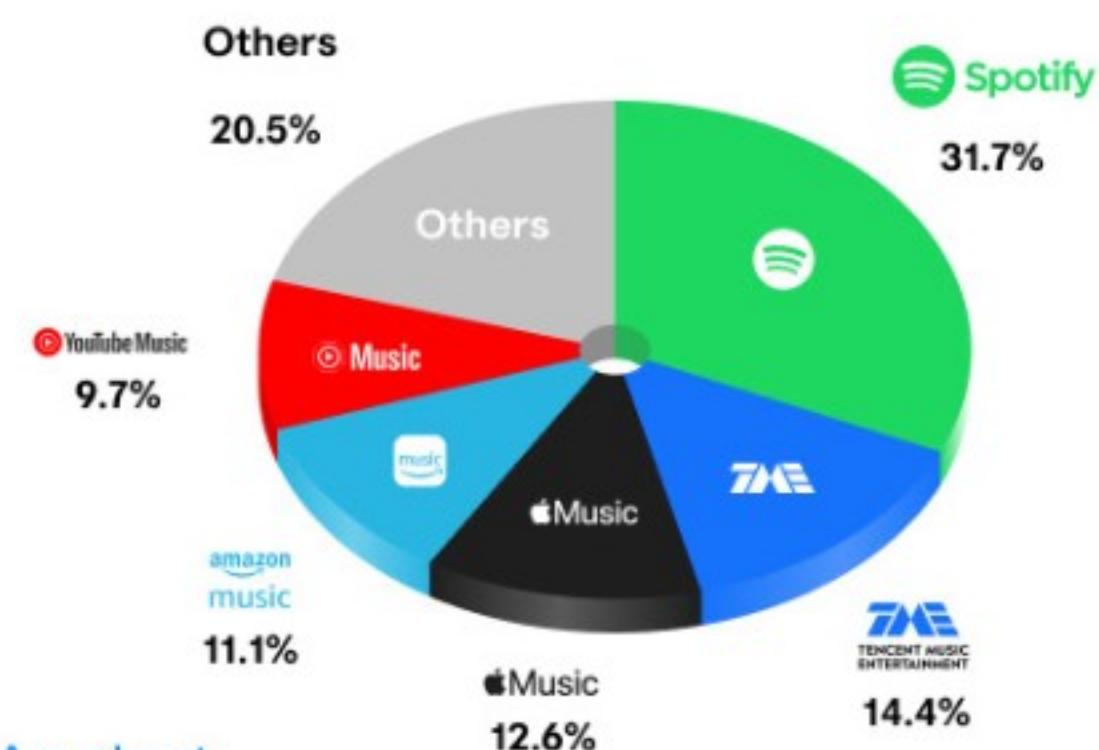


[Backlinko](#)



Cross-Browsing

Oct 2024 Worldwide



[Anychart](#)

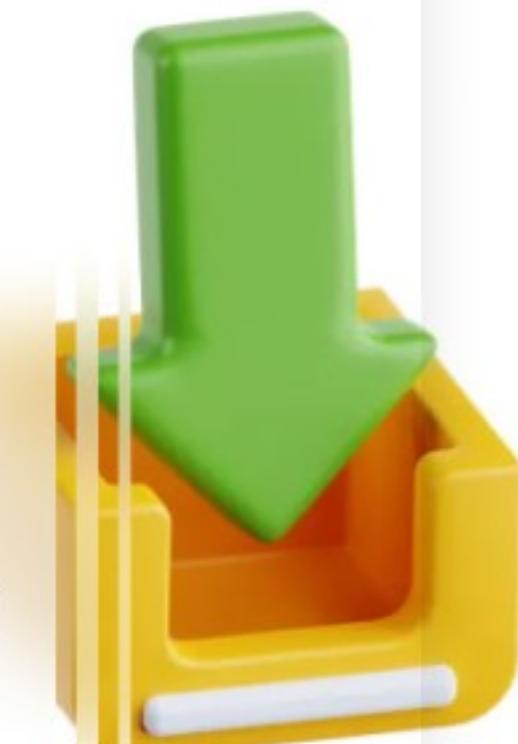
Downloads

Q3 2023 - Q4 2024 Worldwide



675 Million

[Spotify](#)



Paid user revenue

Dec 2024 United States



[Statistica](#)

Competitor Analysis

Application	 Music	 Spotify	 Apple Music	 Amazon Music	 TIDAL
Paid Users	8.5 million	44.4 million	32.6 million	29.3 million	Undisclosed
Free Tier	Yes (ads, limited features)	Yes (ads, limited features)	No	No	No
Library Size	100 Million+ songs	100 Million+ songs	100 Million+ songs	100 Million+ songs	100 Million+ songs
Offline Downloading	Yes (premium)	Yes (premium)	Yes (premium)	Yes (premium)	Yes (premium)
Personalized Playlists	Yes (Discover Mix, New Release Mix, etc.)	Yes (Daily Mix, Discover Weekly)	Yes (Favorites, New Music Mix)	Yes (My Discovery Mix, My Soundtrack)	Yes (My Mix, Mixes for You)
Video Content Integration	Yes (music videos and live performances)	Limited (some video podcasts)	No	No	Limited (select artists)
Social Features	Limited (Shareable playlists)	Strong (Collaborative playlists, Friend activity)	Limited (Share playlists)	Limited	Limited
Unique Features	Extensive YouTube video library	Extensive podcast library, Spotify Wrapped	Spatial Audio, Dolby Atmos	HD and Ultra HD audio options	Catered to new Artists creating a fanbase.

Competitor Analysis

Application	Spotify	Apple Music	Amazon Music	TIDAL
Must Have Features				
Large Music Library	Yes	Yes	Yes	Yes
Offline Downloading	Yes	Yes	Yes	Yes
Search Functionality	Yes	Yes	Yes	Yes
High Quality Audio	Yes	Yes	Yes	Yes
Cross Device Syncing	Yes	Yes	Yes	Yes
Ad Free Option	Yes	Yes	Yes	Yes
Sharing Options	Yes	Yes	Yes	Yes
Nice to Have Features				
Personalized Playlists	Yes	Yes	Yes	Yes
Lyrics Display	Yes	Yes	Yes	Yes
Social Sharing and Discovery	Limited	Yes	Limited	Limited
Podcast Support	Limited	Yes	No	Yes
Video Content	Yes	Limited	No	No
Smart Home Integration	Yes	Yes	Yes	Yes
Music Editing Capability	No	No	No	No
AI generation of music/video	No	No	No	No
Delighters				
Exclusive Content	Limited	Yes	Yes	Limited
Hi Res Audio Support	No	No	Yes	Yes
Spatial Audio or Dolby Atmos	No	No	Yes	No
Collaborative Playlists	No	Yes	No	No
Personalized Year End Recap	No	Yes	No	No
Extensive Video Library	Yes	No	No	Yes

Define

Challenges with Current Music Apps

Background

Limited Exploration

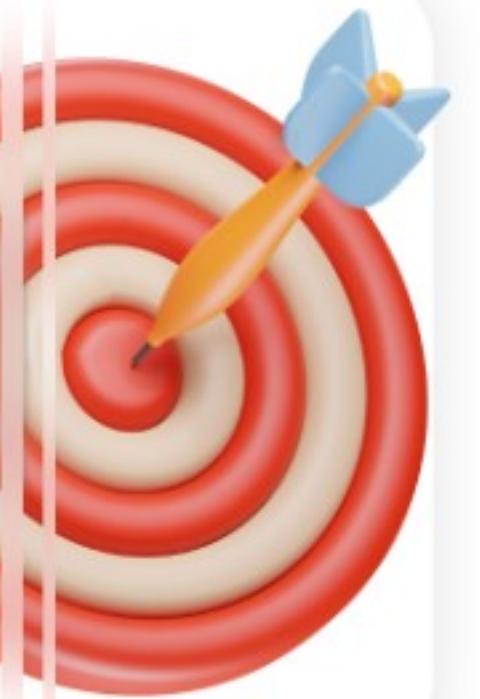
While music apps provide vast libraries, users often stick to familiar playlists, limiting discovery. Algorithmic recommendations sometimes reinforce existing preferences rather than introducing diverse content.



Goals

Retention vs Experience

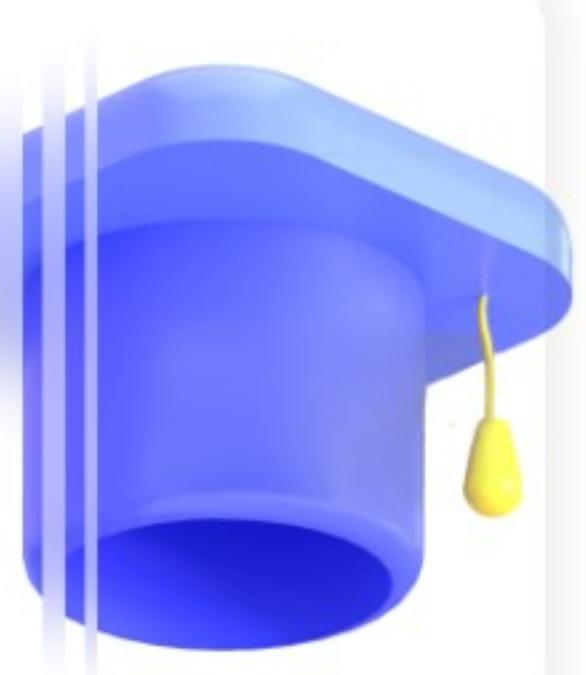
The focus on maximizing engagement can lead to repetitive recommendations and autoplay loops, prioritizing retention metrics over a truly enriching music experience.



Needs

Reliance on Algorithms

Music discovery is heavily dependent on AI, sometimes leading to repetitive suggestions. Users looking for fresh, organic music exploration often find it difficult to break out of algorithmic bubbles.



Pain Points

Independent Artists

Independent musicians face challenges in gaining traction, as platform algorithms favor established artists and viral content. Revenue distribution remains skewed, making sustainability difficult for smaller creators.



Wants

Personalization

Although personalization exists, it is often surface-level. Users may struggle to fine-tune recommendations based on specific moods, activities, or evolving tastes.



Fears

Feature Overload

Frequent additions of new features, such as interactive elements and visual content, can overwhelm users and shift focus away from the core music-listening experience.



Improvement Opportunities

Mood-Aware

Most music apps stick to a static, single-tone interface. Introducing dynamic color-coded themes based on genres or moods helps users emotionally connect with the vibe of the music.



Creator Centric

Instead of shuffling between tools, why not empower users with everything in one place, transform a streaming app into a true music ecosystem, supporting both listeners and creators.



AI Personalization

AI empowering real-time auto-tuning, beats or instrumentals, or even AI video overlays that adapt to the track, or auto-generates ambient visuals based on user emotion, activity, or even time of day.



User Control

Give listeners more power to personalize how they consume content. This kind of granular control, often overlooked, shows respect for users' preferences and constraints.



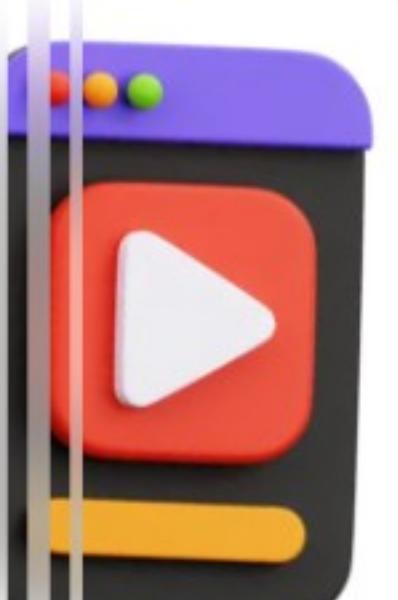
Jam Sessions

Collaborate in real-time or asynchronously on tracks. A feature that allows friends or creators to layer vocals, beats, or instruments, and sync once reconnected, can democratize music creation.



Story Mode

A create feature where songs are visually represented as story-style lyric snippets with background art or animations. Users could design these, turning music into bite-sized content perfect for social sharing.



Empathize



User Persona

Robert Jones

About

Pronouns	He/Him
Age	21
Education	High school Student
Interest	Lacrosse

Skills

Internet	★★★★★
Programs	★★★★★
Social networks	★★★★★
Communication	★★★★★

BEHAVIOURS

- ⌚ Searches for music using keywords like high-energy, party bass, or study calm.
- ⌚ Tunes the equalizer settings for personalized sound, focusing on high bass and sharp treble.

GOALS

- ⌚ Reduce the time spent curating playlists by using AI-based recommendations for specific activities.
- ⌚ To have seamless access to motivational and mood-specific music.

NEEDS

- ⭐ Discover new tracks and emerging artists who fit his unique tastes.
- ⭐ Control over sound settings, particularly bass and treble, to match his music preferences.

EXPERIENCES

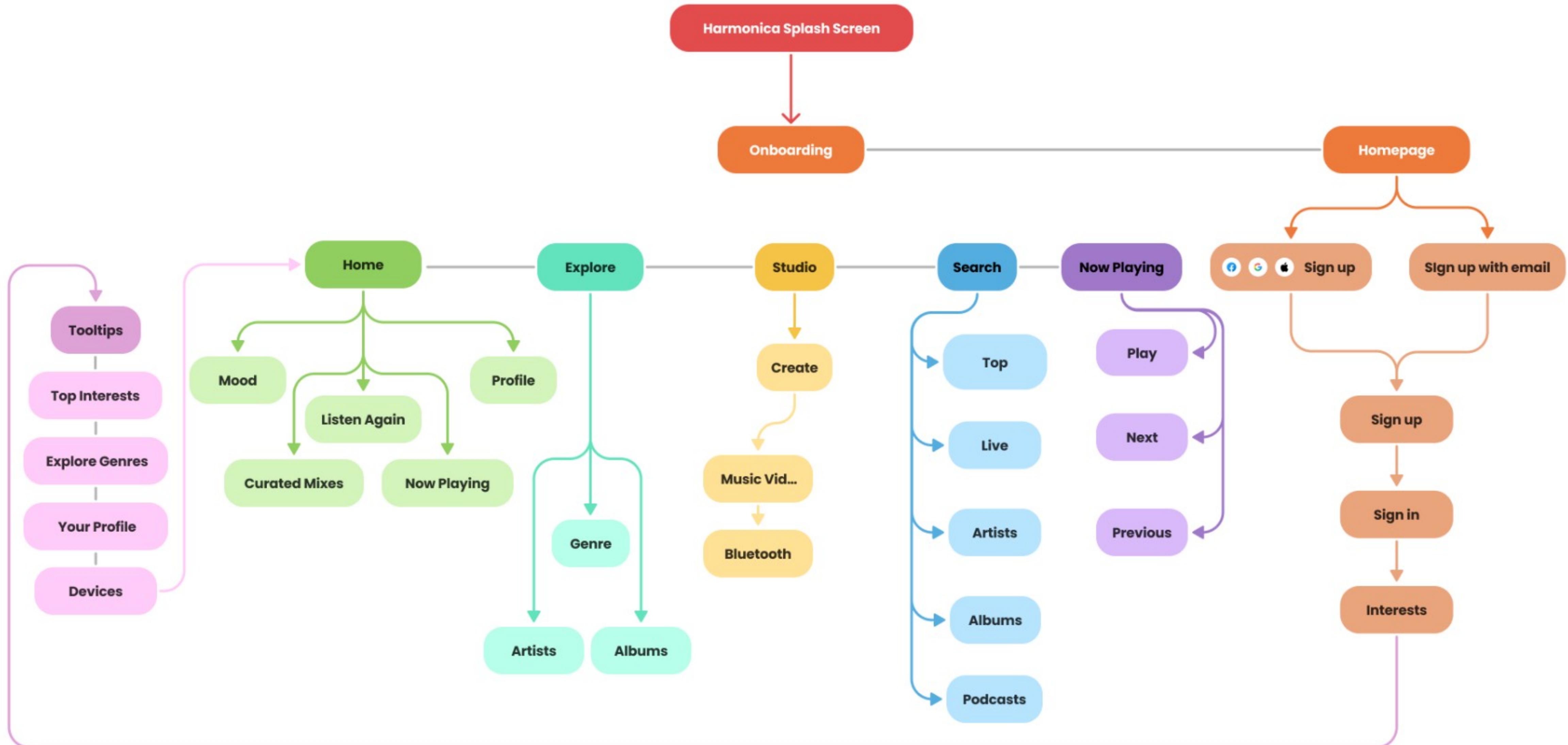
- :(Robert frequently uses streaming platforms but often feels overwhelmed by the abundance of choices.
- :(He values discovering lesser-known artists to create a sense of individuality and support local talent.

Moodboard



Deliver

Information Architecture



Low-Fidelity Prototype

Welcome

Onboarding

Choose interests

Home

Play song (Poster)

Play song (Video)

Lyrics

Song Options

Studio Mode

Choose Soundtrack

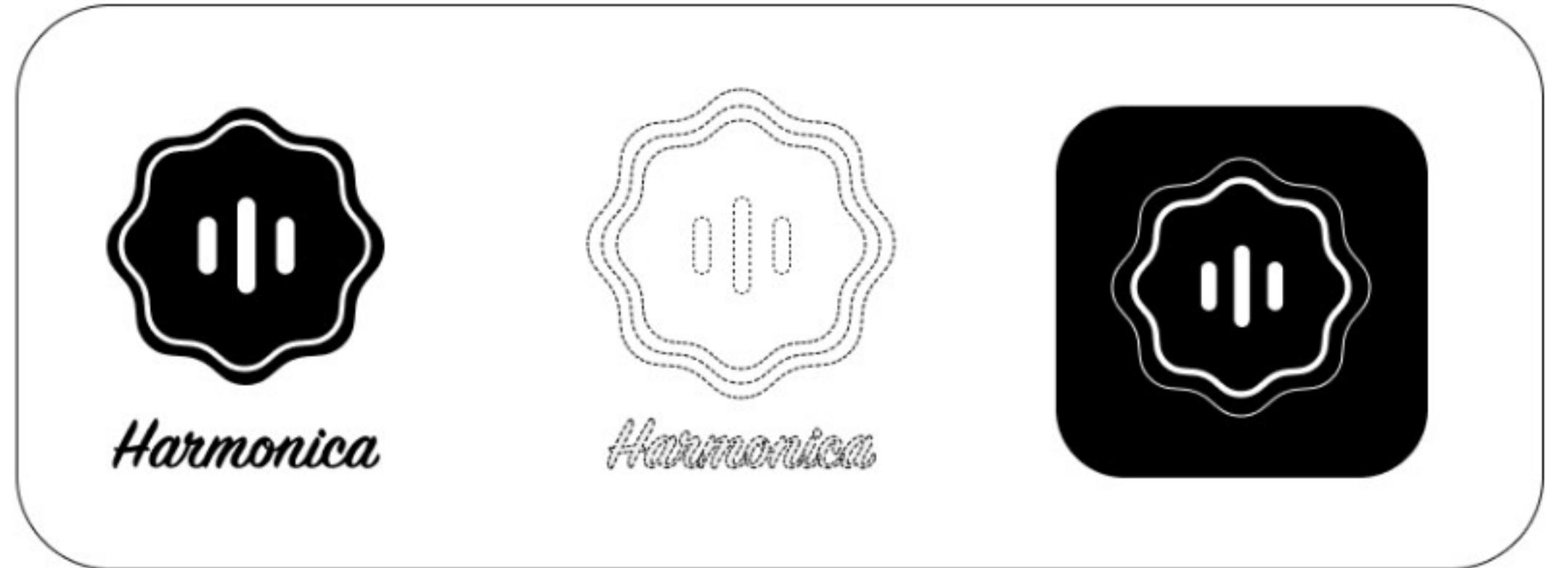
Create Music Video

Create Music

Explore

Library

Branding

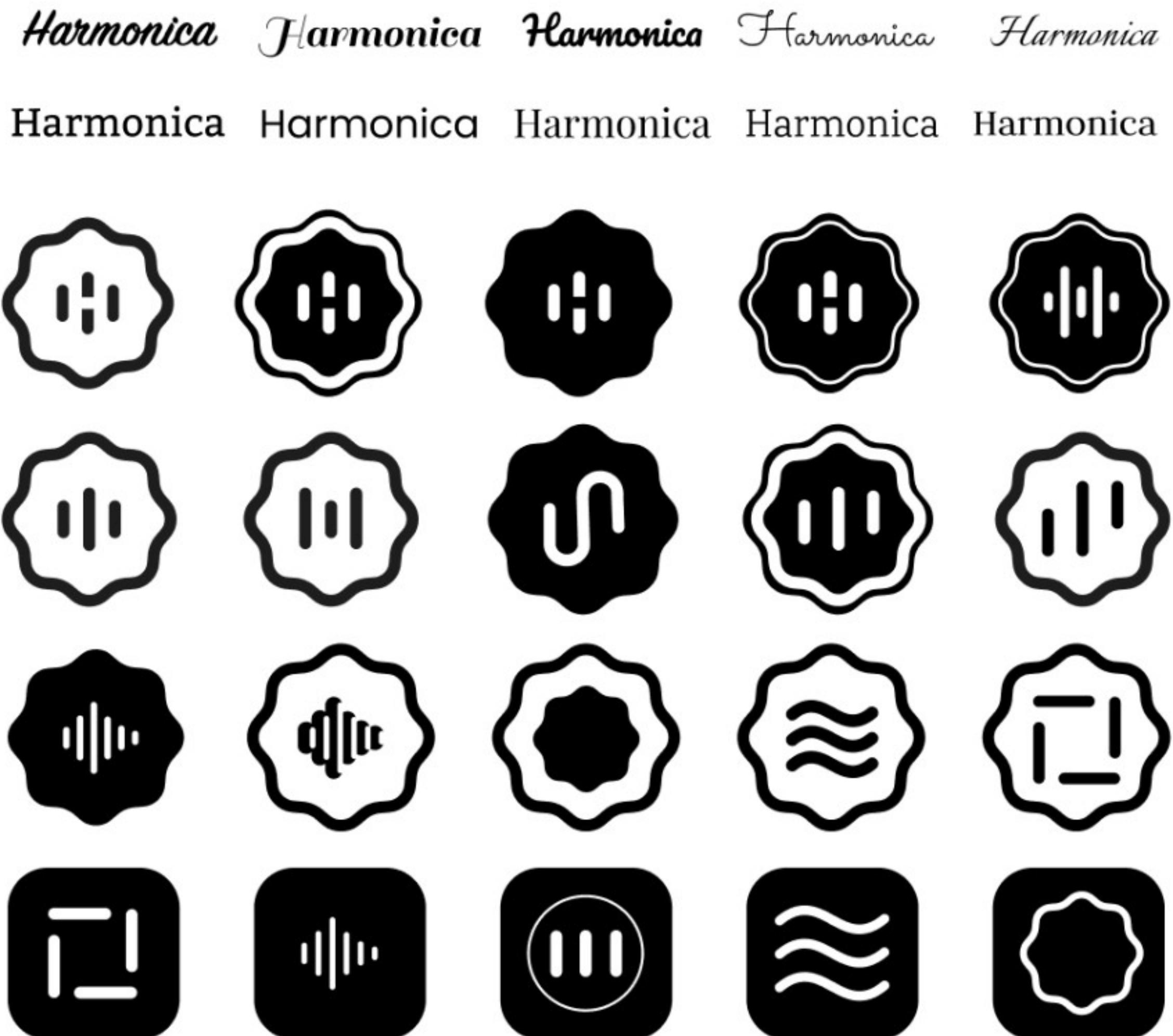


Balance • Musical • Harmonic

har.mon.i.ca

a small rectangular wind instrument with a row of metal reeds along its length, held against the lips and moved from side to side to produce different notes by blowing or sucking.

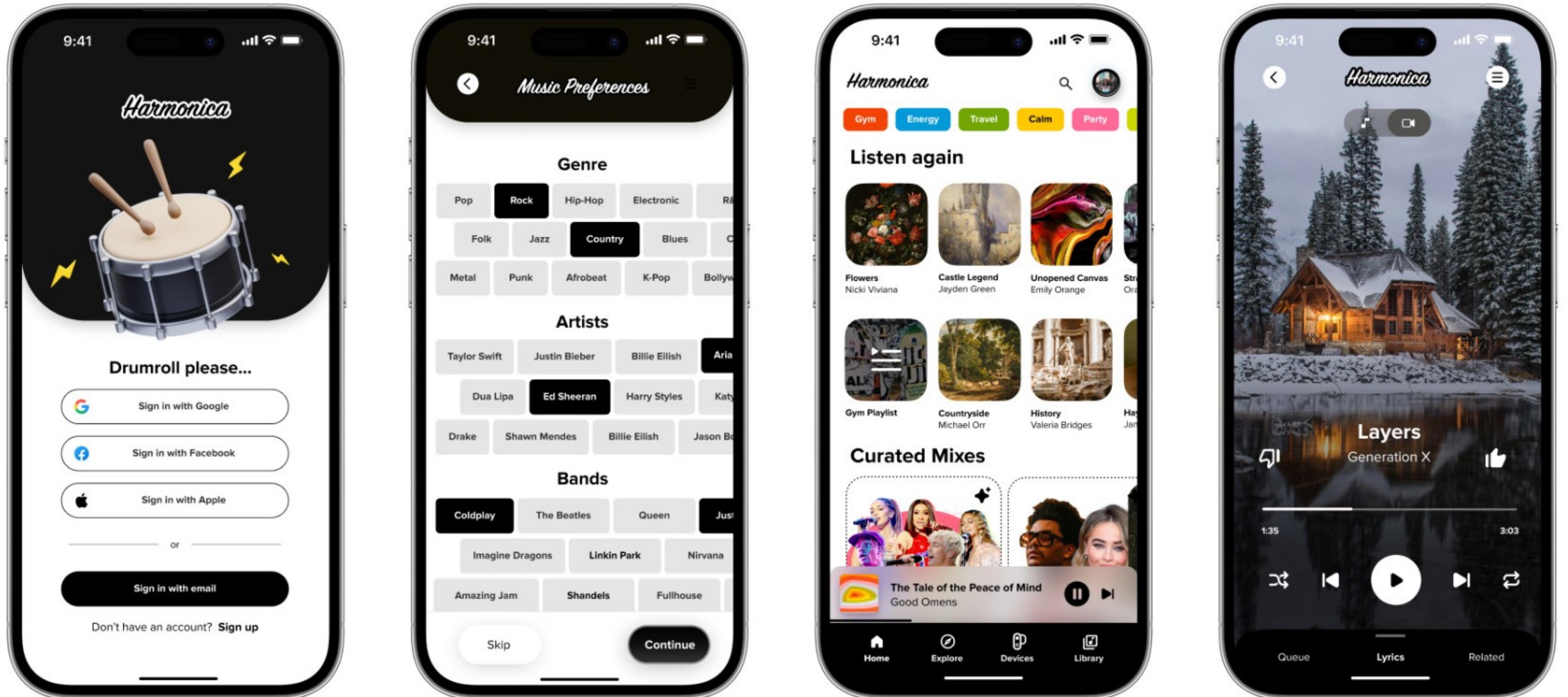
Your Harmonized Mood Setter



Onboarding



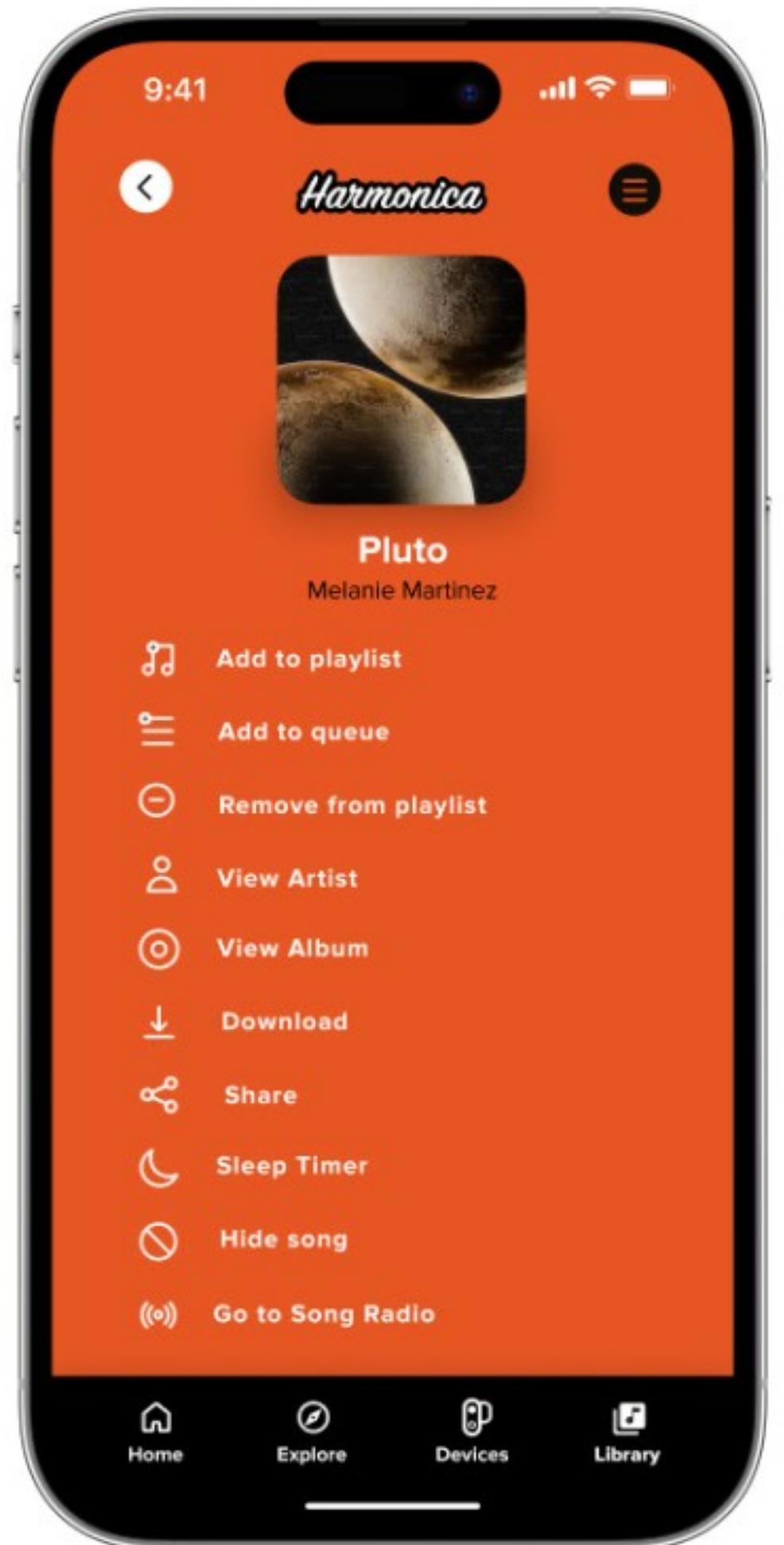
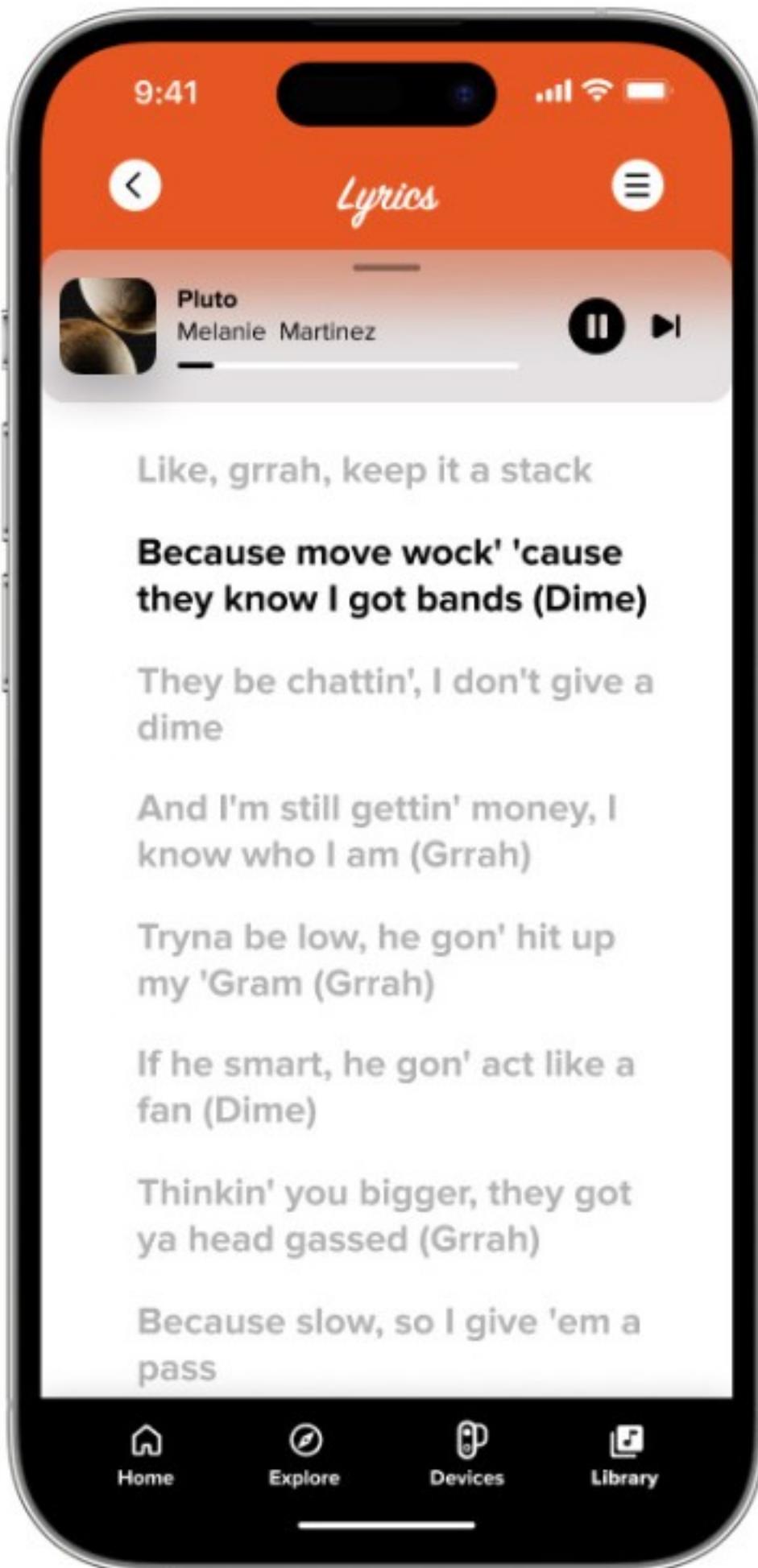
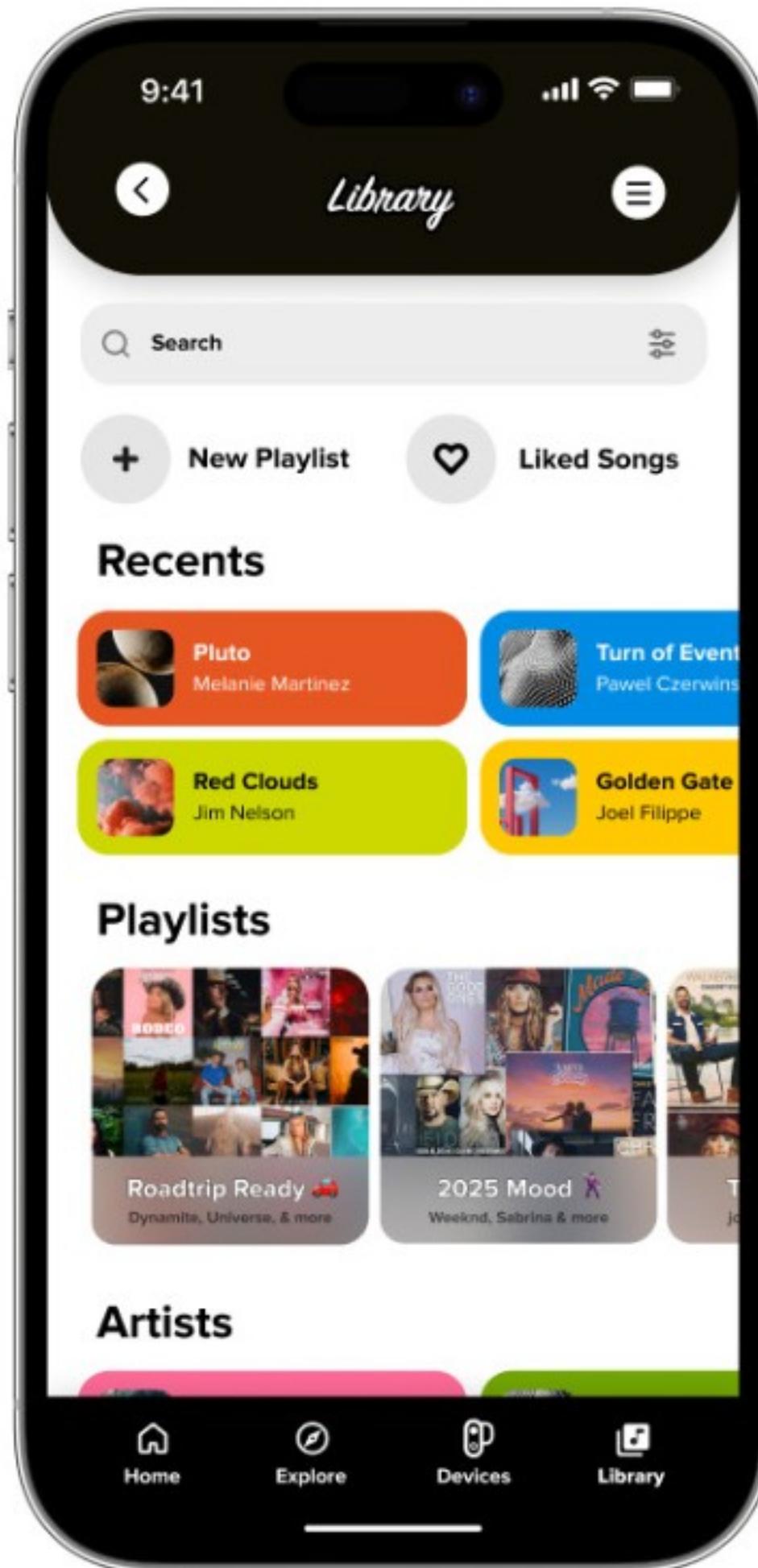
Preferences



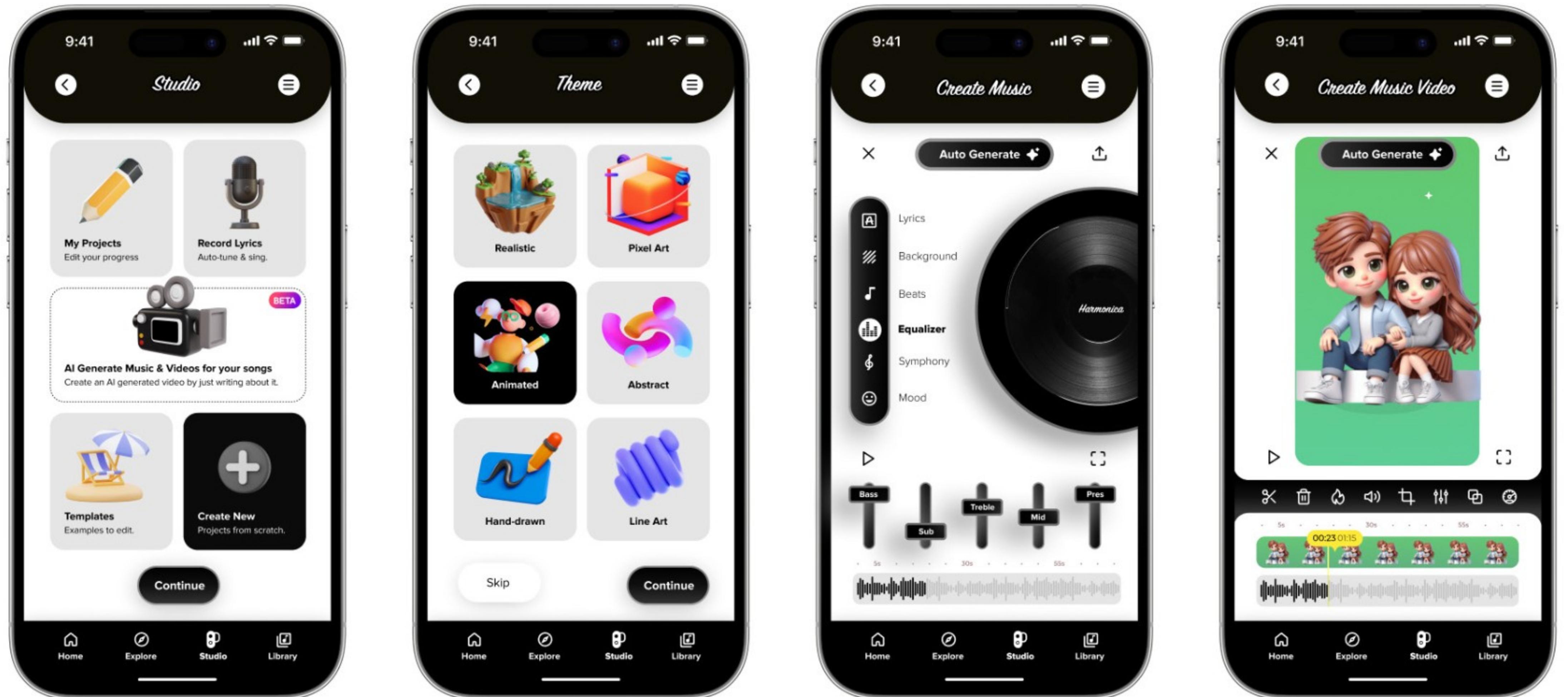
Now Playing



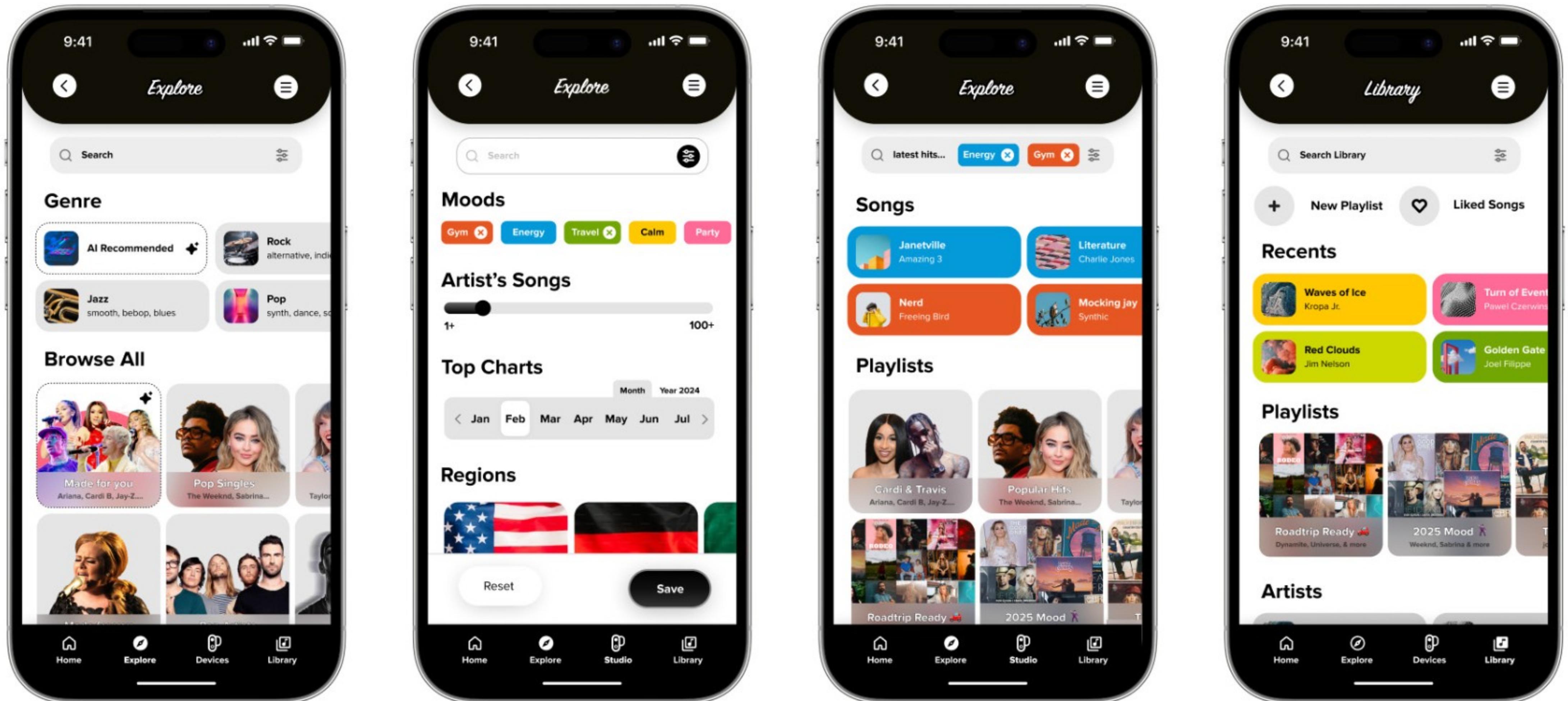
Search



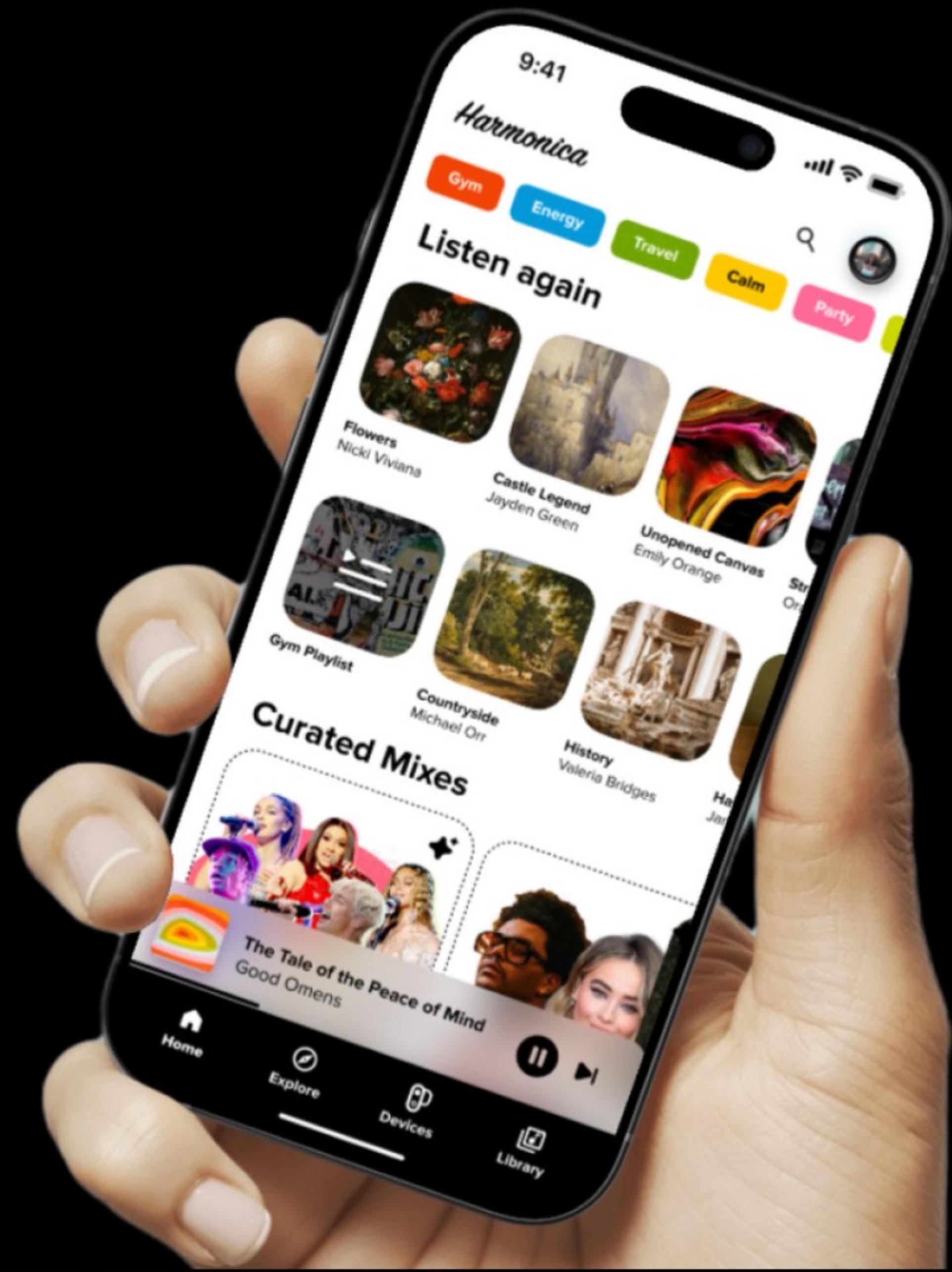
Studio



Explore



Harmonica





NHR



Discover

🇬🇧 United Kingdom - NHS App

About

Central Patient Portal

The NHS App (launched Jan 2019) is an NHS England-developed portal for patients. By May 2021 it had 8.52 million downloads and ~4.45 million registered users, usage surged after adding the COVID-19 vaccine/passport feature.

pmc.ncbi.nlm.nih.gov/



Features

Key Attributes

Features include NHS Login authentication, GP appointment booking, prescription ordering, and viewing new entries from one's GP record. All GP practices in England must allow patients to read new record entries via the app

digital.nhs.uk



Challenges

Inclusive Adoption

Adoption has been uneven: registration rates were about 25% lower in the most deprived areas and higher in practices with younger or predominantly White patients. For example, app uptake was 36% higher where a larger share of patients were White.

pmc.ncbi.nlm.nih.gov/



Policy

Interoperability Mandate

The NHS App is part of NHS England's digital strategy (NHS Long Term Plan, NHSX). Interoperability is mandated: NHS policy requires patient portals to use open standards. NHS Digital now uses HL7 FHIR R4 (the "FHIR UK Core") for new APIs.



digital.nhs.uk

Data Management

Control and Handling

Users can manage their data sharing preferences through the app, deciding how their personal data is used for research and planning. However, managing data sharing preferences on behalf of someone else is not permitted through the app.

[BioMed Central](https://biomedcentral.com)

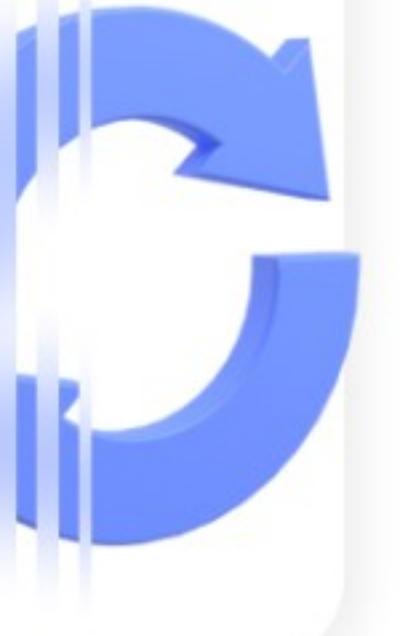


Updates

Improvements and Fixes

Recent updates to the NHS App include enhanced navigation for hospital and specialist appointments, improved display of test results, and added features like filtering messages and booking specific appointment times.

nhs.uk



🇨🇦 Canada – Provincial EHR/PHR Systems

About

Decentralized EHR

Canada does not have a single national EHR. Provinces use shared e-health records, EMRs, patient portals with federal support via Canada Health Infoway. Each region has its own identifier (provincial health number).



Features

Key Attributes

Provincial EHR systems in Canada typically include storage and access to patient health information. Integration with hospital and primary care settings. Support for clinical decision-making and patient management.



Challenges

Inclusive Adoption

The adoption and advancement of EHRs vary by province, with some regions like Alberta being more advanced, while others like Ontario lag behind due to a lack of coordination between provincial and regulatory authorities.



Policy

Interoperability Mandate

Several provinces require primary health care EMR systems to be certified before integration with provincial EHR systems, ensuring that only approved systems are used to manage patient information.



Data Management

Control and Handling

Infoway's tracking, interoperable e-health access expanded from one province in 2006 to all jurisdictions by 2019. They provide patient lab results and records across care sites. Full cross-province linking is limited.



Updates

Improvements and Fixes

Extending large-scale electronic health records to Canadian family medicine requires adaptive planning and workflow adjustments, with an emphasis on training family physicians to effectively utilize EHR systems in ambulatory settings.



Australia – My Health Record

About

National Digital Health Record System

My Health Record is Australia's national digital health record system, providing a secure platform for storing key health information accessible to both patients and healthcare providers. All Australians have a record unless they choose to opt out.

[Australian Digital Health Agency](#)



Features

Key Attributes

Australia My Health Record features, Store and access vaccinations, prescriptions, and emergency contact details. Add personal health notes, allergy information, and advance care plans. Include Indigenous status and preferred language.

[Trusted Health Advice](#)



Challenges

Inclusive Adoption

A survey revealed that over 70% of General Practitioners (GPs) believe My Health Record is not achieving its objectives, with many rarely using the platform to access or upload patient information.

[healthed.com.au](#)



Policy

Interoperability Mandate

Healthcare organizations participating in My Health Record must comply with relevant legislation and obligations, including operating in accordance with security and access policies.



[Australian Digital Health Agency](#)

Data Management

Control and Handling

The Australian Government has outlined a framework guiding the secondary use of My Health Record data for research, policy, and planning purposes, ensuring data is used to improve the health system effectively.

[Department of Health and Aged Care](#)



Updates

Improvements and Fixes

Efforts are underway to modernize My Health Record by improving the sharing of pathology and diagnostic imaging information, aiming to provide better and faster access to key health information for consumers and healthcare providers.

[Department of Health and Aged Care](#)



Competitor Analysis

Country	System Name	Coverage Type	User Access	Challenges	Features
🇬🇧 U.K.	NHS App + GP Records	Universal	NHS App, Online	Equity gaps, uneven use	Vaccine passport, full GP records access
🇦🇺 Australia	My Health Record	Universal (Opt-Out)	Web + Mobile Access	Low patient engagement, privacy concerns	Data control & deletion, large-scale data volume
🇨🇦 Canada	Provincial EHRs (e.g. Netcare)	Decentralized	Varies by province	Fragmentation, provider data lag	Federated governance, Infoway coordination
🇺🇸 U.S. (for instance)	No national system	Fragmented by provider/insurer	Patient Portals, TEFCA in progress	Interoperability, siloed data, consent complexity	N/A

Define

EHR systems for the U.S. Population

Background

The U.S. has promoted EHR adoption to enhance healthcare quality, safety, and efficiency. The Health Information Technology for Economic and Clinical Health (HITECH) Act incentivized providers to adopt EHRs, aiming for meaningful use that improves patient care.



Goals

EHR implementation aims to improve patient care quality, enhance care coordination, increase practice efficiencies, and ensure secure patient data exchange. These goals support better health outcomes and streamlined healthcare delivery.



Needs

Essential needs include interoperability between different EHR systems, robust data security measures, and functionalities that support clinical decision-making. These ensure comprehensive patient care and protect sensitive health information.



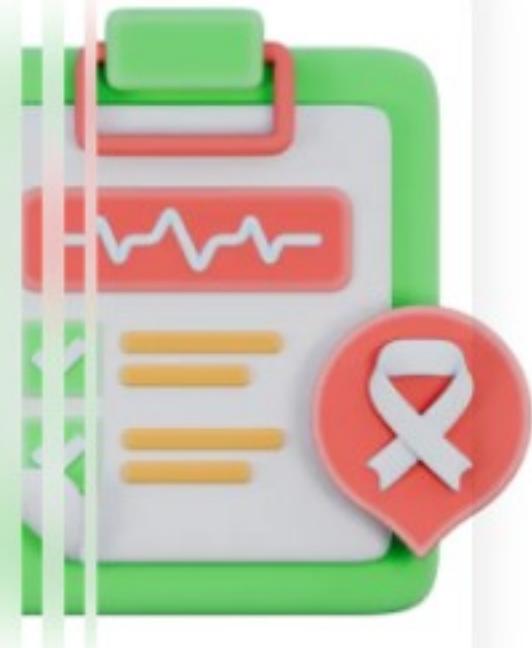
Pain Points

Common challenges involve complex user interfaces, time-consuming data entry, and lack of system interoperability. These issues can lead to clinician frustration and potential impacts on patient safety.



Wants

Users desire EHR systems that are intuitive, reduce documentation time, and integrate seamlessly into clinical workflows. Features like easy navigation, quick data entry, and real-time access to patient information are highly valued.



Fears

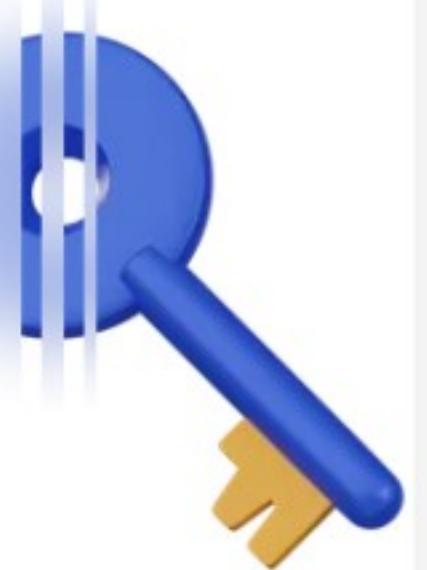
Concerns revolve around data breaches compromising patient privacy, system downtimes affecting care delivery, and the potential for EHRs to contribute to clinician burnout due to increased administrative tasks.



Opportunities

Access

Patients desire immediate and comprehensive access to health records, including clinical notes, test results, and treatment plans. This fosters trust and empowers patient participation in their healthcare decisions.



Interoperability

Patients often receive care from multiple providers, and interoperability ensures that each provider has access to the complete medical history, reducing redundant tests and improving care coordination.



Usability & Efficiency

Efficient systems reduce documentation time, minimize errors, and allow clinicians to focus more on patient care. EHR systems that are user-friendly and integrate smoothly into clinical workflows.



Security & Privacy

Users expect security measures to safeguard their sensitive health information from breaches. Data privacy encourages patients to engage more fully with digital health tools and share information crucial for their care.



Engagement

Features like personalized health education, reminders, and communication tools empower patients to take charge of their health, leading to better outcomes and satisfaction.



Support Diversity

A unified EHR system must cater to the diverse needs of the U.S. population, including varying levels of health literacy, language preferences, and access to technology.



Empathize



User Persona

Patricia Morgan

Patricia is a 47-year-old nurse practitioner working in a busy Baltimore hospital. She's tech-savvy but overwhelmed by the number of disconnected tools she has to manage daily. With tight schedules and high patient volume, she values systems that work fast, integrate well, and don't add to her cognitive load. She believes a unified EHR should serve both patients and providers efficient, secure, and centered around care, not clicks.

About

Pronouns	She/Her
Age	47
Education	Nurse Practitioner
Interest	Traveling

Skills

Internet	★★★★★
Programs	★★★★★
Social networks	★★★★★
Communication	★★★★★

BEHAVIOURS

- ⓘ Updates patient charts frequently across different platforms.
- ⓘ Uses shortcuts and workarounds to save time navigating EHR systems.

GOALS

- ⏵ To spend less time documenting and more time with patients.
- ⏵ To easily access a patient's full medical history from any provider or hospital.

NEEDS

- ★ One login and one platform for all health data labs, prescriptions, referrals.
- ★ Real-time, accurate data sharing between departments and facilities.

EXPERIENCES

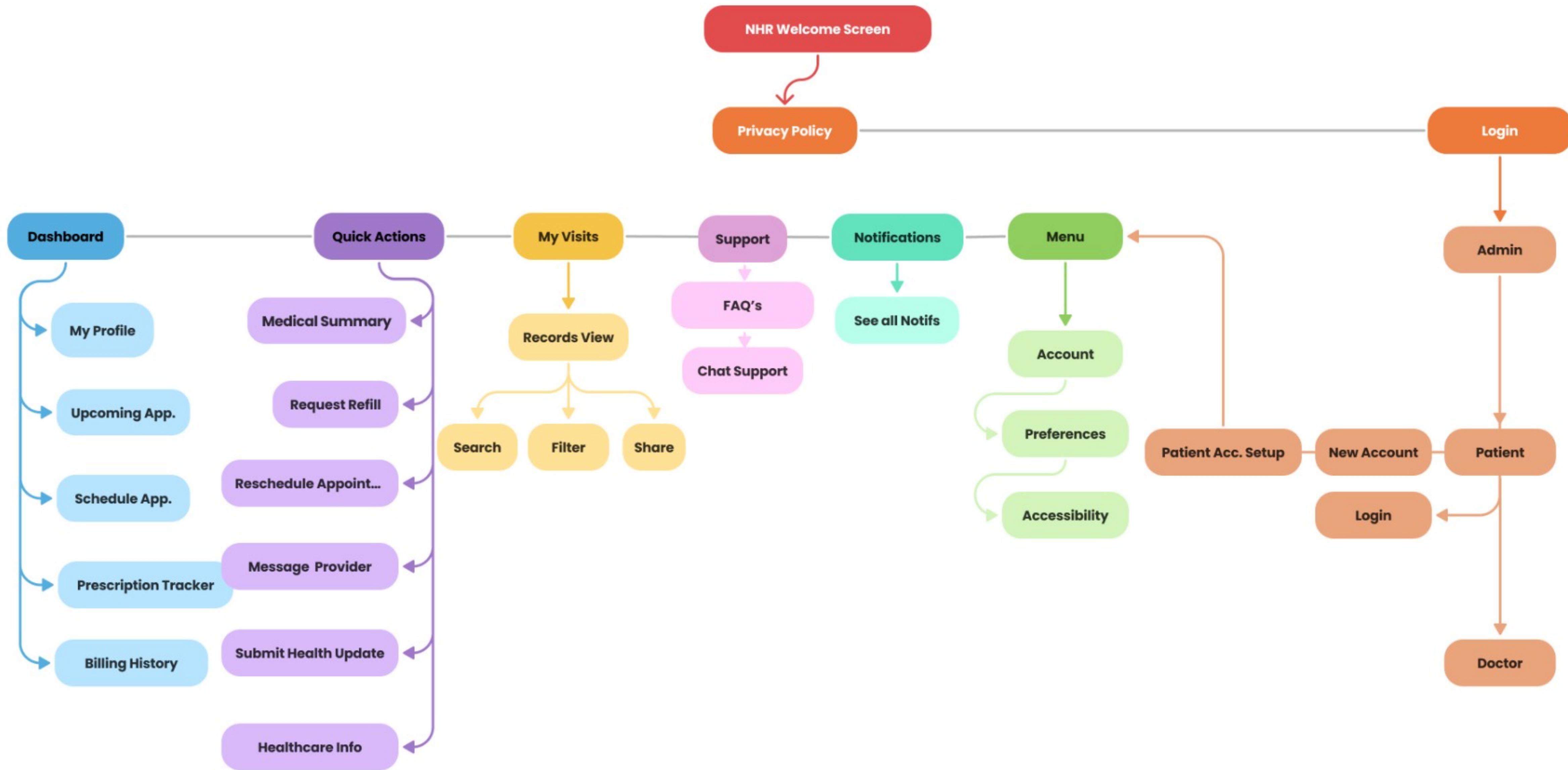
- ☹ Finds it frustrating when lab results or histories are unavailable from other providers.
- ☹ Believes a centralized, interoperable EHR would improve patient safety and cut down on me

Moodboard



Deliver

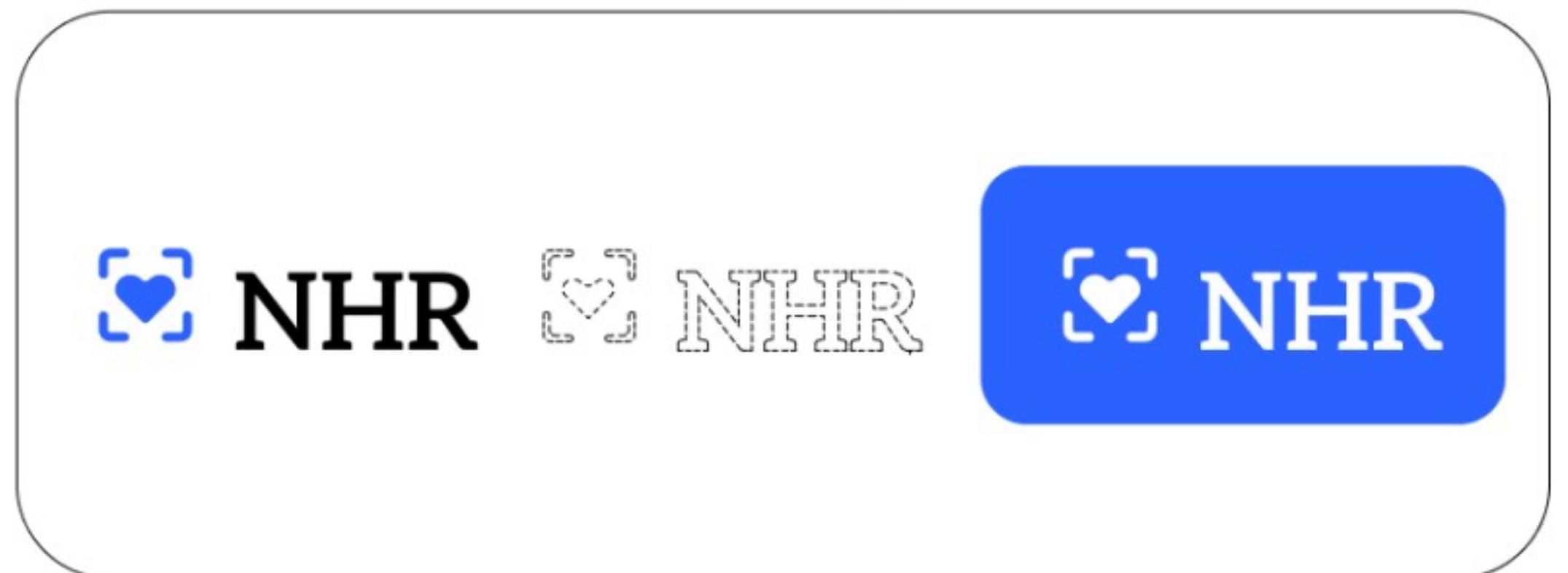
Information Architecture



Low-Fidelity Prototype

The image displays a 5x3 grid of low-fidelity wireframe prototypes for a medical application, likely a Diagnostician or Patient Record Management system. The prototypes are arranged in three rows. The first row contains five screens: 1. Login screen for a 'NEW DIAGNOSTICIAN' with fields for User Name and Password. 2. 'ADD PERSONAL DETAILS' screen with fields for Patient ID, Age, Patient Name, Gender, Patient Phone, Blood Type, and Patient Address. 3. 'PATIENTS DETAILS' screen showing a list of patients with columns for Name, ID, Phone, Address, Age, and Gender. 4. 'CONFIRM PATIENT DETAILS' screen for appointment booking with fields for Patient ID, Age, Patient Name, Gender, Reason, Provider Name, and Diagnosis. 5. 'CREATE A NEW ACCOUNT' screen with tabs for 'DIAGNOSTICIAN DETAILS ENTRY' and 'PATIENT DETAILS ENTRY'. The second row contains five screens: 1. 'ADD PROVIDER DETAILS' screen with fields for Name, Available hours per Day, ProviderID, and Password. 2. 'PATIENTS DETAILS' screen showing a list of patients with columns for Name, ID, Phone, Address, Age, Gender, Blood Type, and Major Disease. 3. 'ADD PROVIDER DETAILS' screen for provider entry with fields for Name, ID, Available Hours, and Password. 4. 'Dashboard' screen showing Today's Patients (12), Pending Records (3), and Requests (3). It includes sections for Recent Patients (Patient Profile, Last Visit, View Record), Recent Activities (Update saved for patient ABC #123456, New Message from Provider XYZ regarding patient care), and a sidebar with Diagn. Profile, Appointments, Patient Health Records, and Messages. 5. 'Today's Appointments' screen showing a grid of appointments for the day, with buttons to View Record and Create New. The third row contains five screens: 1. 'Upcoming Appointments' screen showing a grid of appointments for the week, with buttons to View Record and Create New. 2. 'Notifications' screen listing various notifications with icons and descriptions. 3. 'Diagnosis Summary' screen showing a prescription for 'Patient Name: Alice Smith' with details: Prescribe date 2/16/2024, Prescription: Rx 100 mg Metformin, Dosage: 1000 mg/day, Frequency: qid - every 4 hours, and Instructions: Take with meals. It also includes a legend for prescription abbreviations. 4. 'Prescription' screen showing a detailed prescription for 'Patient Name: Alice Smith' with fields for Prescription, Dosage, Frequency, and Instructions. It includes a signature field and buttons for Print and Previous.

Branding



Trust • Health • Unified

National Health Records

The NHR logo places the heart-inside-a-target symbol in superscript to signify priority, protection, and precision in a health recording app.

Navigating Your Health Nation Wide.



Getting Started

The diagram illustrates the user flow through the application's initial screens:

- Privacy Policy Screen:** Shows the "NHR" logo and a "Privacy Policy" link. It includes a "Last Update: 04/16/2025" section, a note about system enhancements, and a "Terms & Conditions" section with four numbered points. At the bottom are "Reject" and "Accept" buttons.
- Accept Privacy Policy:** A callout arrow points from the "Accept" button to the "Welcome Screen".
- Welcome Screen:** Displays the "NHR" logo, a portrait of a female doctor, and the text "Welcome to Community Health Records Navigating Your Health, Community wide." It features a "Get Started" button and a "Login Options" section with "Login as Admin", "or", "Login as Patient", "or", and "Login as Provider" buttons. A "Sign Up" link is also present.
- Get Started to the Account Login Options:** A callout arrow points from the "Get Started" button on the Welcome Screen to the "Login Options" section.

Account Types

The image displays four mobile application login screens arranged in a grid-like pattern, each with a corresponding background photograph of a healthcare professional:

- Admin Login:** Shows two healthcare workers in scrubs at a computer. The screen includes fields for "Username *", "Password *", and "Login" buttons, along with links for "New Admin" and "Reset Password".
- Patient Login:** Shows a patient smiling while wearing a blood pressure cuff. The screen includes fields for "Username *", "Password *", and "Login" buttons, along with links for "New Patient" and "Reset Password".
- Provider Login:** Shows a healthcare provider smiling and waving. The screen includes fields for "Username *", "Password *", and "Login" buttons, along with links for "New Provider" and "Reset Password".

A large blue arrow points from the "Admin Login" section towards the "Patient Login" section. A dashed blue line connects the "Patient Login" section to the "Provider Login" section.

Choose between Admin Login, Patient Login or Provider Login

Patient Account Setup

The diagram illustrates the flow of the Patient Account Setup process. It starts with a mobile phone screen showing the first step of the setup. A dashed arrow points from this screen to a second, larger screen representing the continuation of the process. The first screen shows fields for personal details like Patient ID/Username, Date of Birth, Gender, and Blood Type. The second screen shows fields for medical details like Primary Care Provider, Known Allergies, Medical History, and Current Medication.

First **Add Personal Details** and then **Add Medical Details**

Patient Account Setup

9:41 Mon Jun 10 100% NHR

Add Personal Details Add Medical Details

Patient ID/ Username *
104804018

Patient Name *
Full Name

Patient Phone *
+1(000) 000-000

Patient Address
Address

Date of Birth *
Select

Gender *
Select

Blood Type *
Select

Emergency Contact
Full Name

Next

Add Personal Details Add Medical Details

Primary Care Provider *
Full Name

Appointment Type *
Select

Date of Last Visit
Select

Medical Insurance *
Select
Yes
No

Known Allergies *
Select

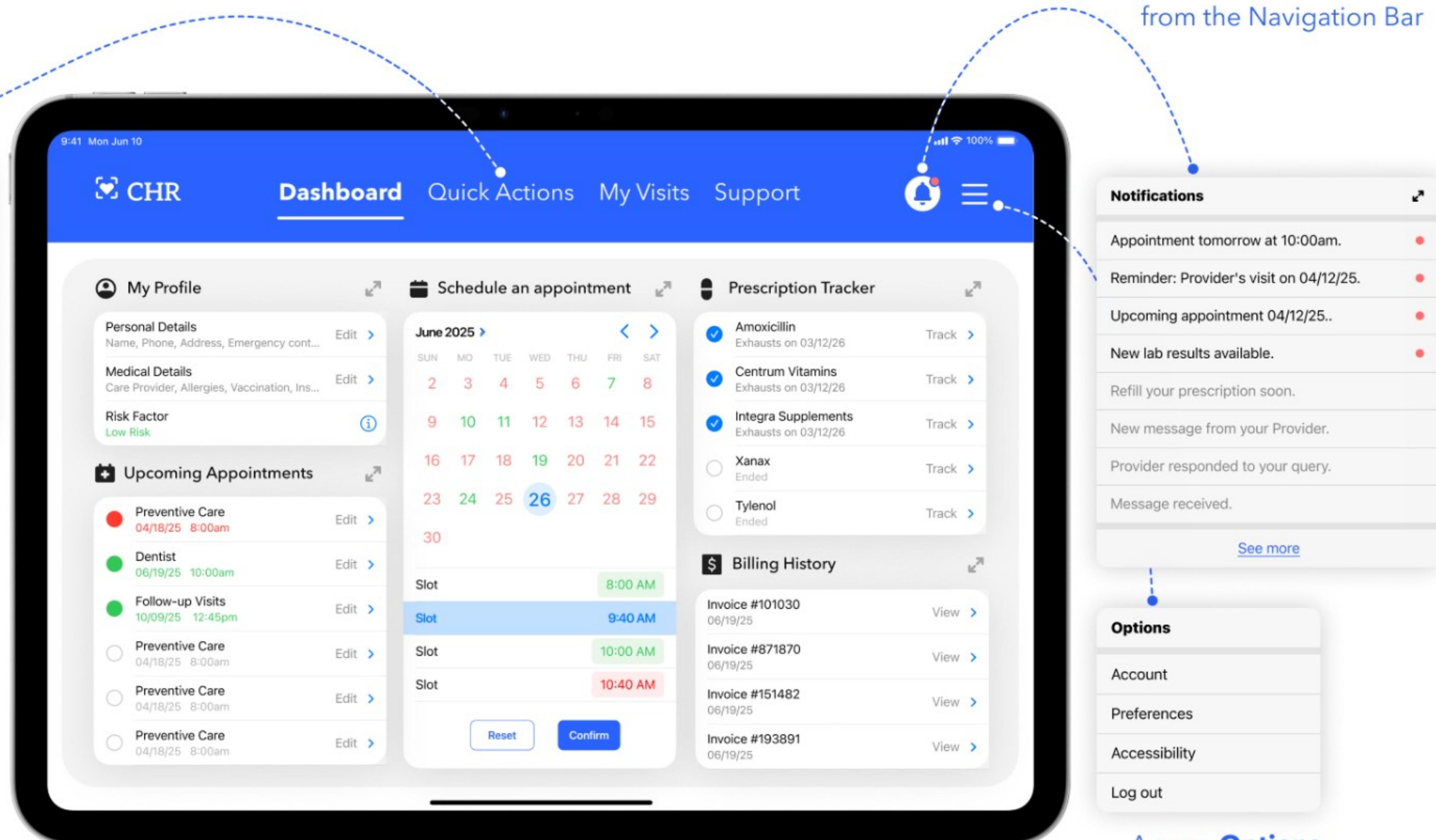
Medical History *
Describe your Medical History

Current Medication *
Select

Major Diagnosis *
Select

Patient Dashboard

Explore **Quick Actions** from the Navigation Bar



Access **Notifications** from the Navigation Bar

Notifications

Appointment tomorrow at 10:00am.

Reminder: Provider's visit on 04/12/25.

Upcoming appointment 04/12/25..

New lab results available.

Refill your prescription soon.

New message from your Provider.

Provider responded to your query.

Message received.

[See more](#)

Options

Account

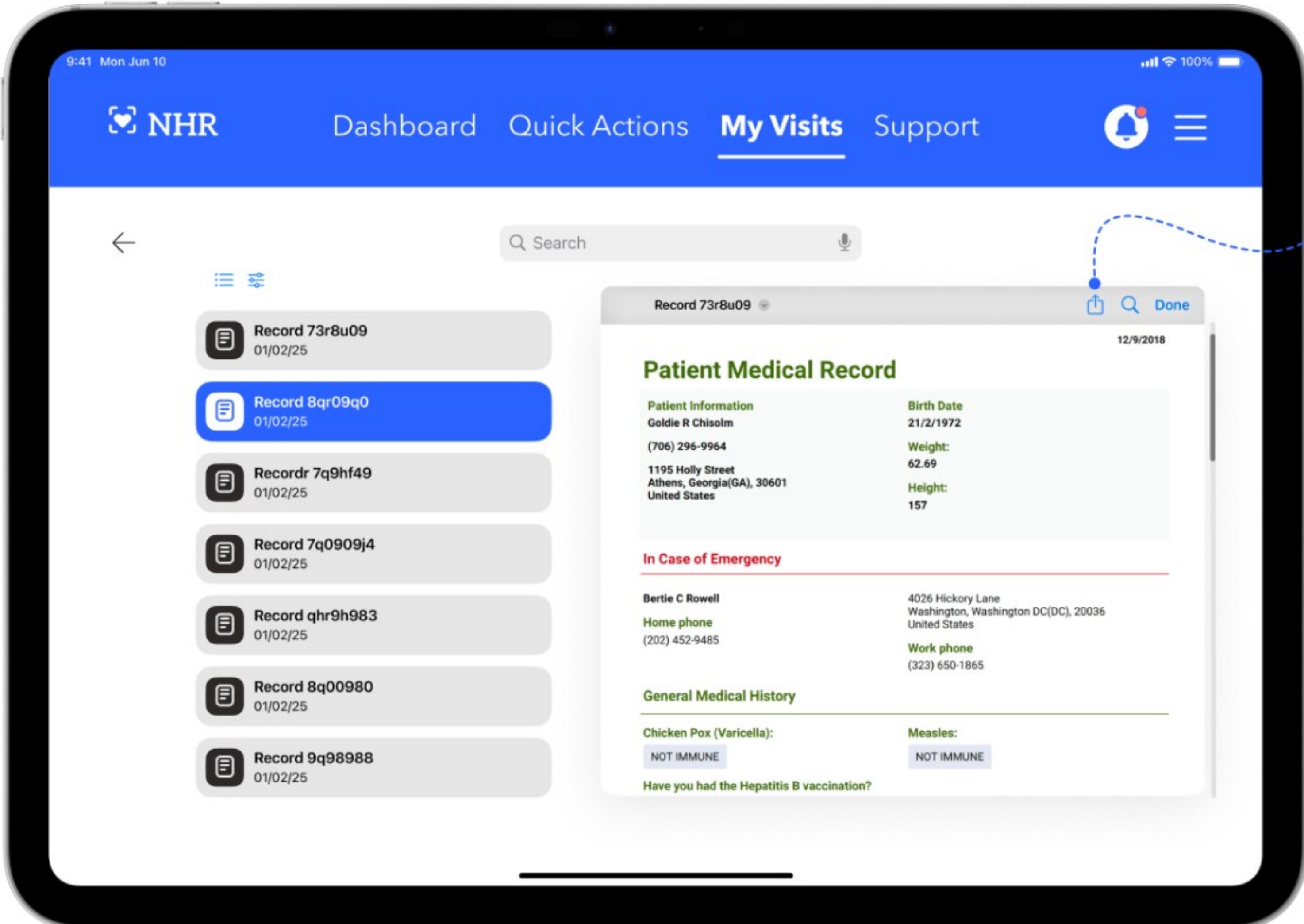
Preferences

Accessibility

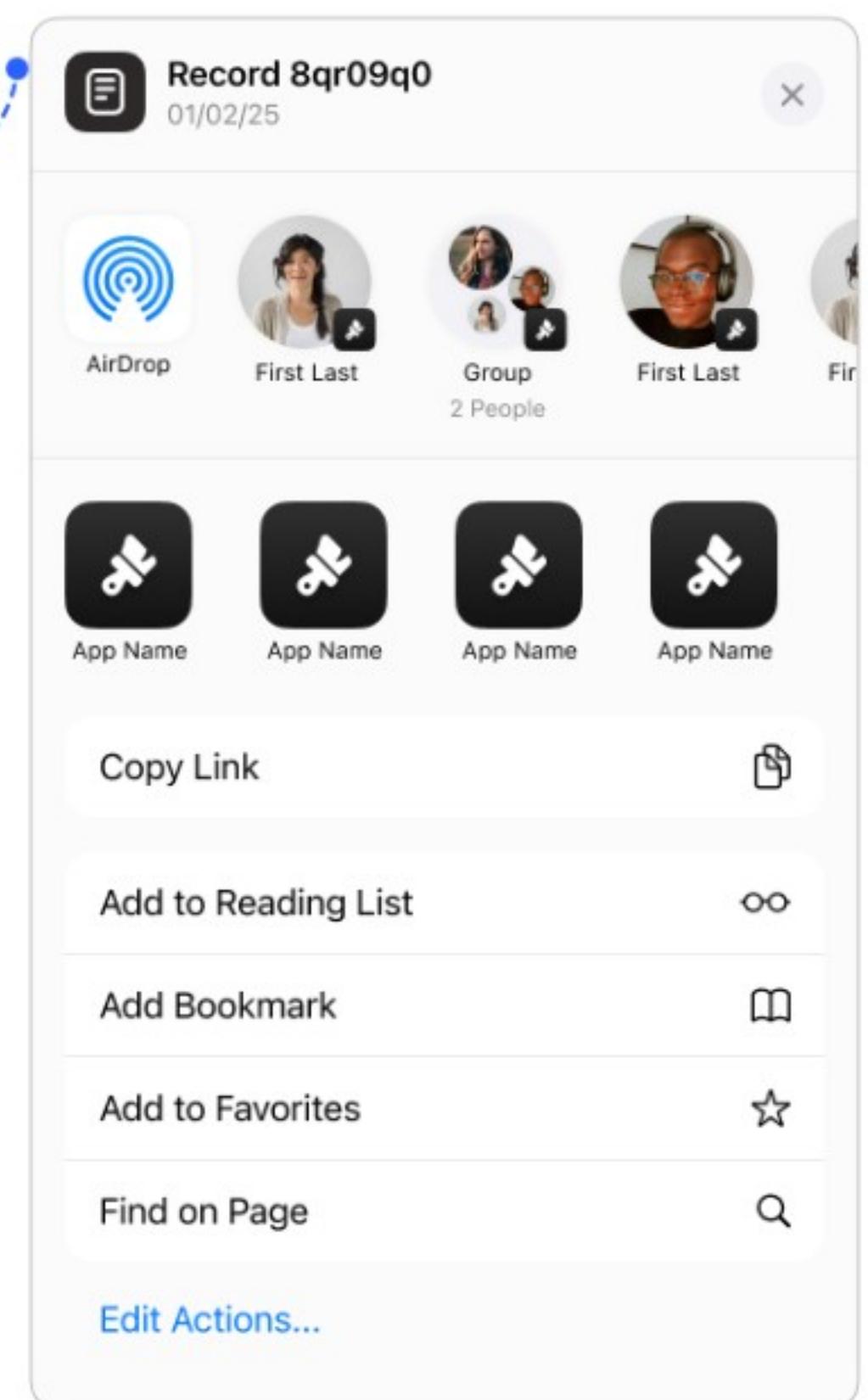
Log out

Access **Options** from the Navigation Bar

Patient Visits



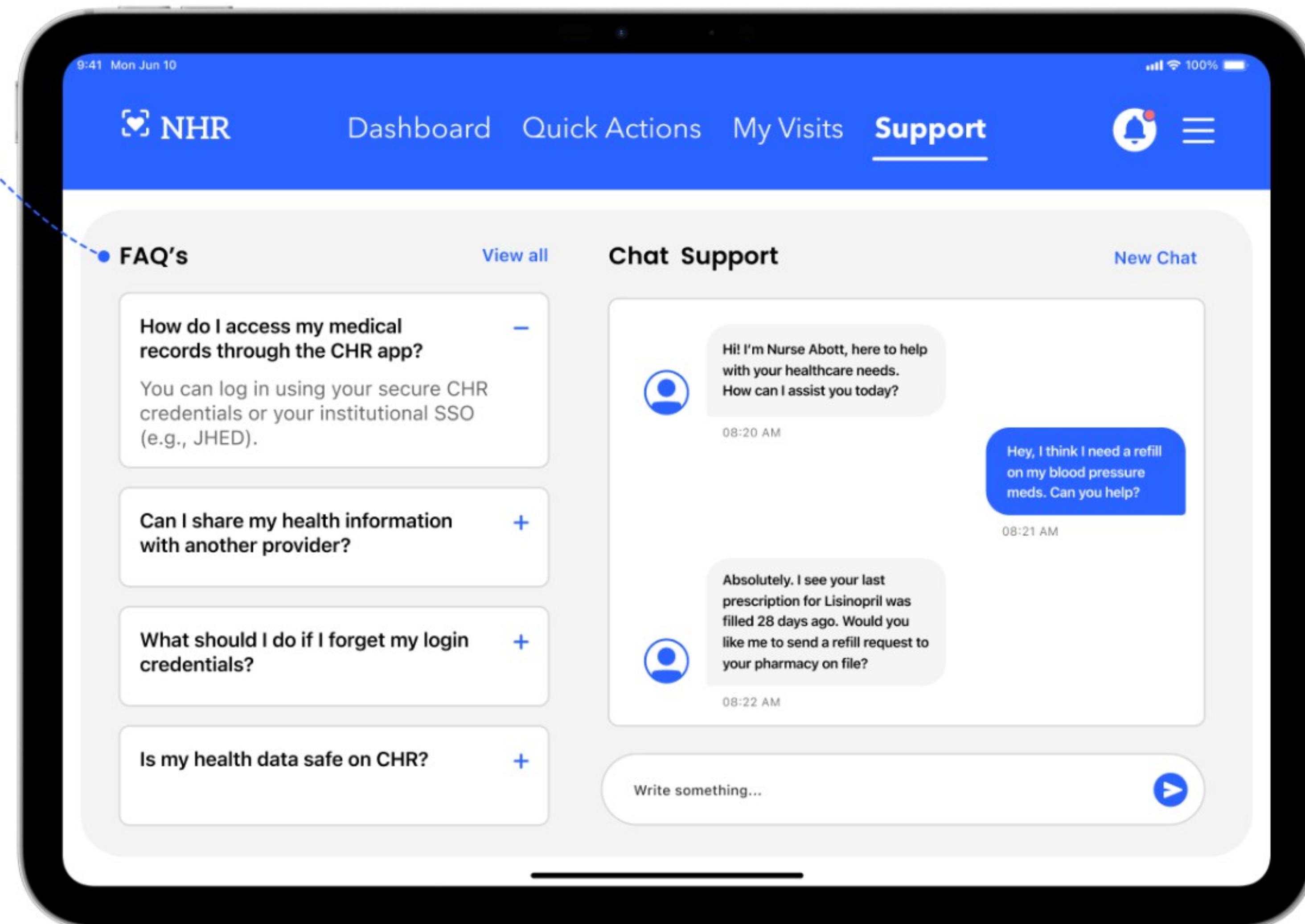
Share **Records**
from individual Records



Patient Support

Get Support via
Frequently Asked Questions

- How do I access my medical records through the CHR app?**
You can log in using your secure CHR credentials or your institutional SSO (e.g., JHED).
- Can I share my health information with another provider?**
Yes, use the "Share Record" feature to securely send your data to any authorized provider.
- What should I do if I forget my login credentials?**
Click "Forgot Password" or reset via SSO if using institutional login like JHED.
- Is my health data safe on CHR?**
Yes, CHR uses encryption, HIPAA-compliant protocols, and multi-factor authentication for maximum security.



Provider Account Setup

Authenticate via the
JHU Portal

JOHNS HOPKINS
UNIVERSITY & MEDICINE

Sign in

User Sign In Address (see below)

Can't access your account?

Next

Login or MFA Problems? Click Here for Help

For your User Sign In Address use:

JHED User: JHEDid@jh.edu

Guest User: Your email address

First Time JHED Users Click Here

Use of this system is governed by the [Johns Hopkins Acceptable Use Policy](#)

 [Sign-in options](#)

NHR Provider Account Setup **Next**

Add Personal Details

Provider ID/ Username * example123

Provider Name * Full Name

Provider Phone * +1(000) 000-000

Provider Status * Select

NPI (National Provider Identifier) * Select

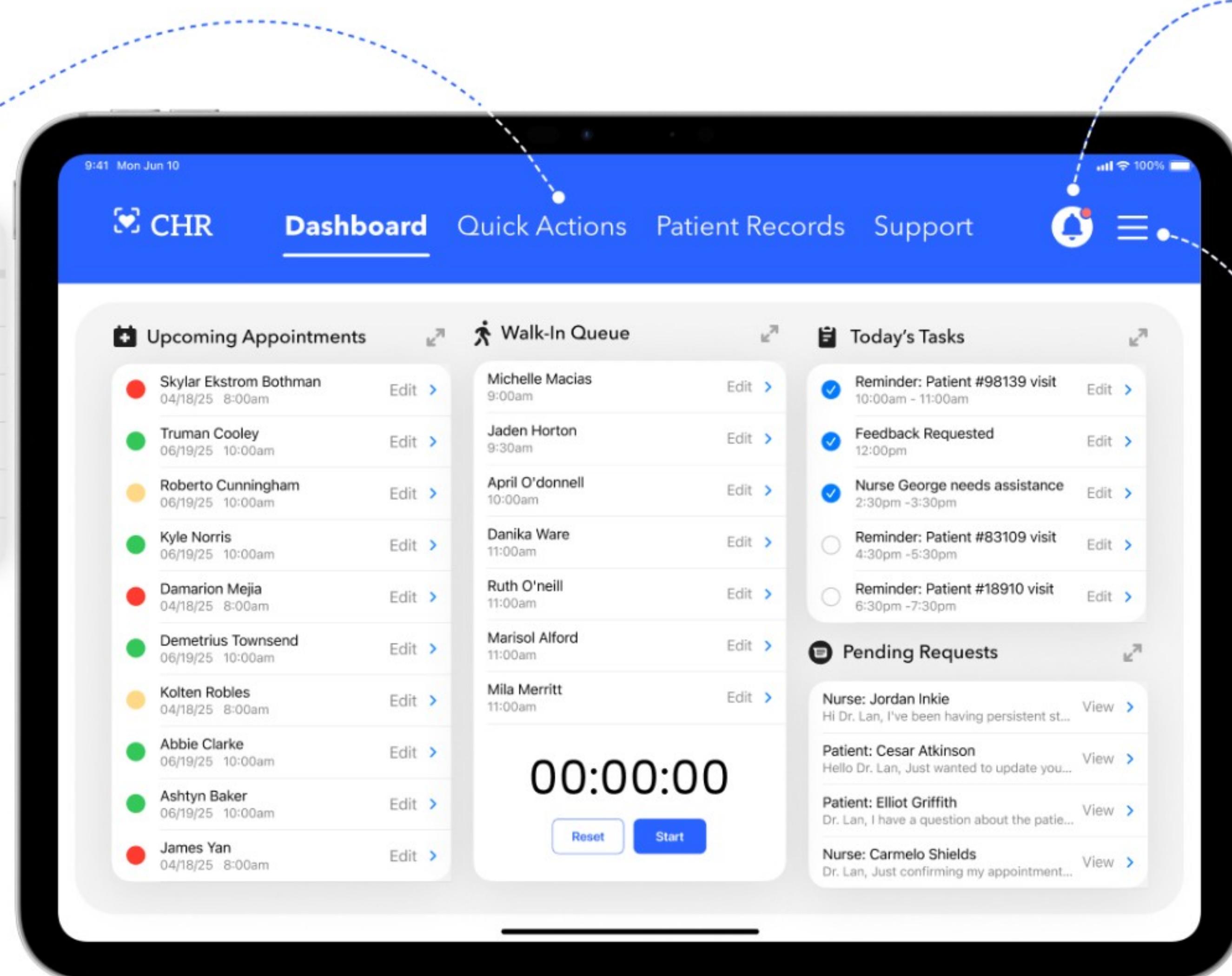
Profession Type * Select

Affiliated Health Systems * Affiliated Hospitals, Institutions

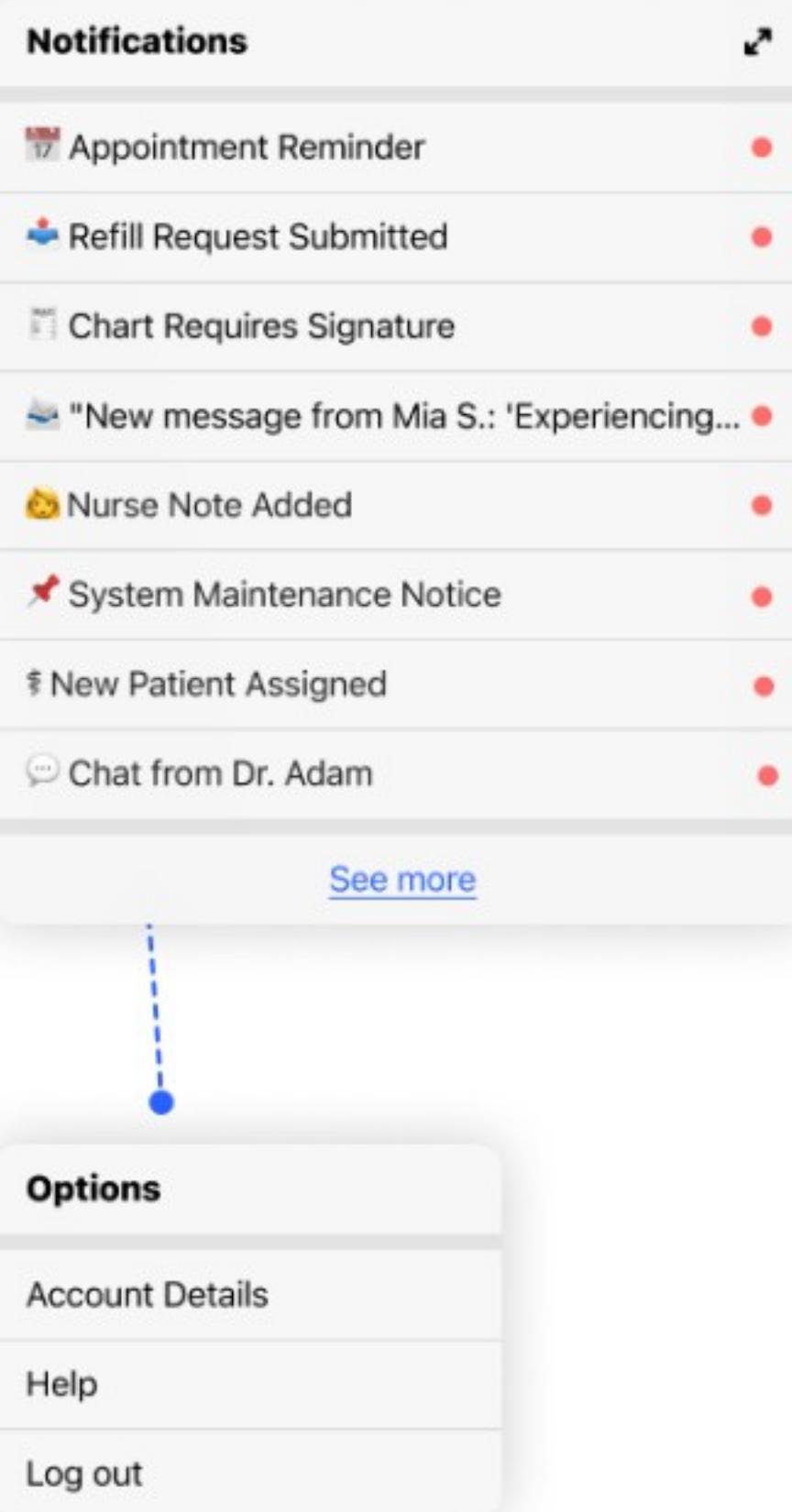
Emergency Contact * Full Name

Provider Dashboard

Explore **Quick Actions** from the Navigation Bar

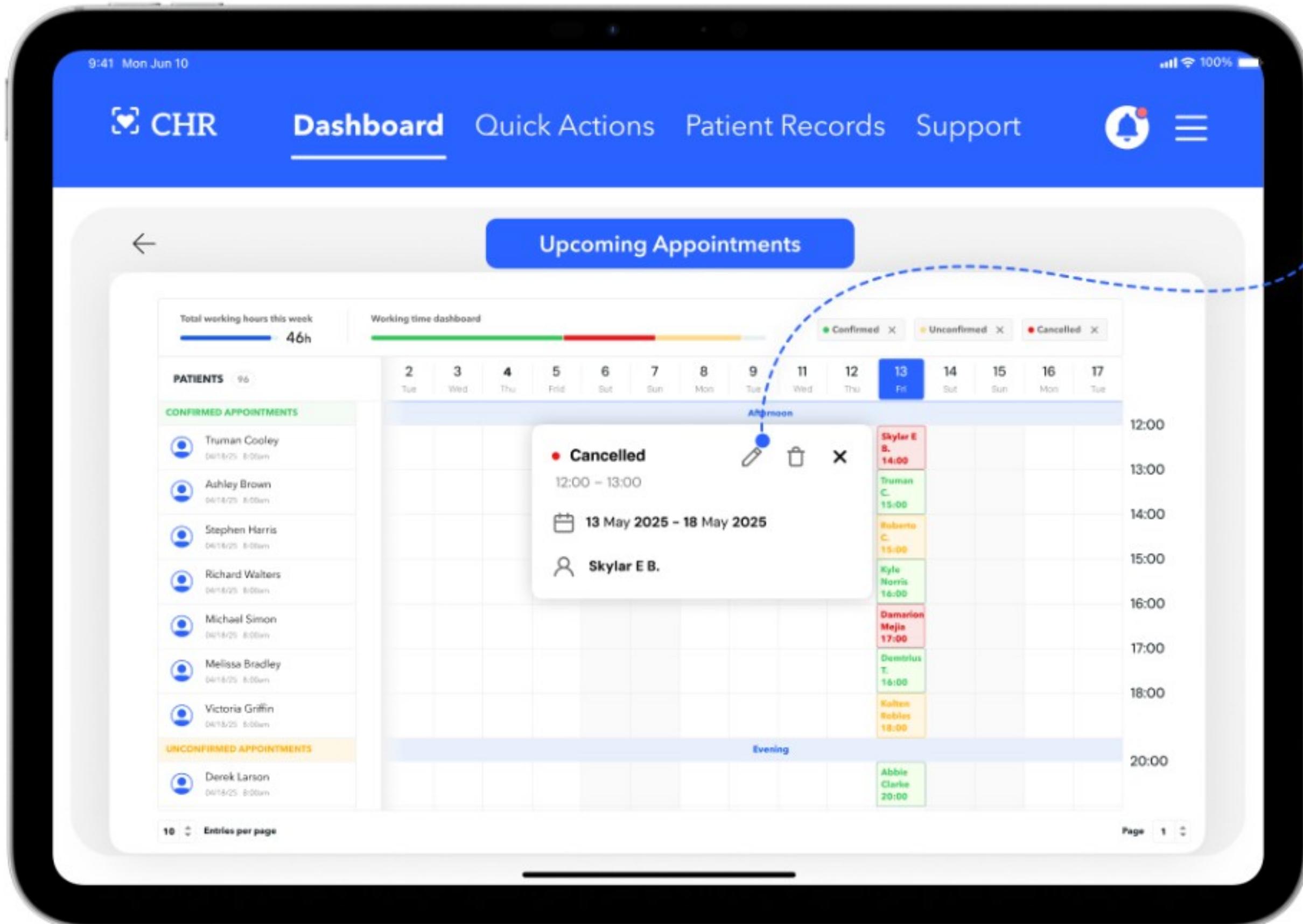


Access **Notifications** from the Navigation Bar



Access **Options** from the Navigation Bar

Upcoming Appointments



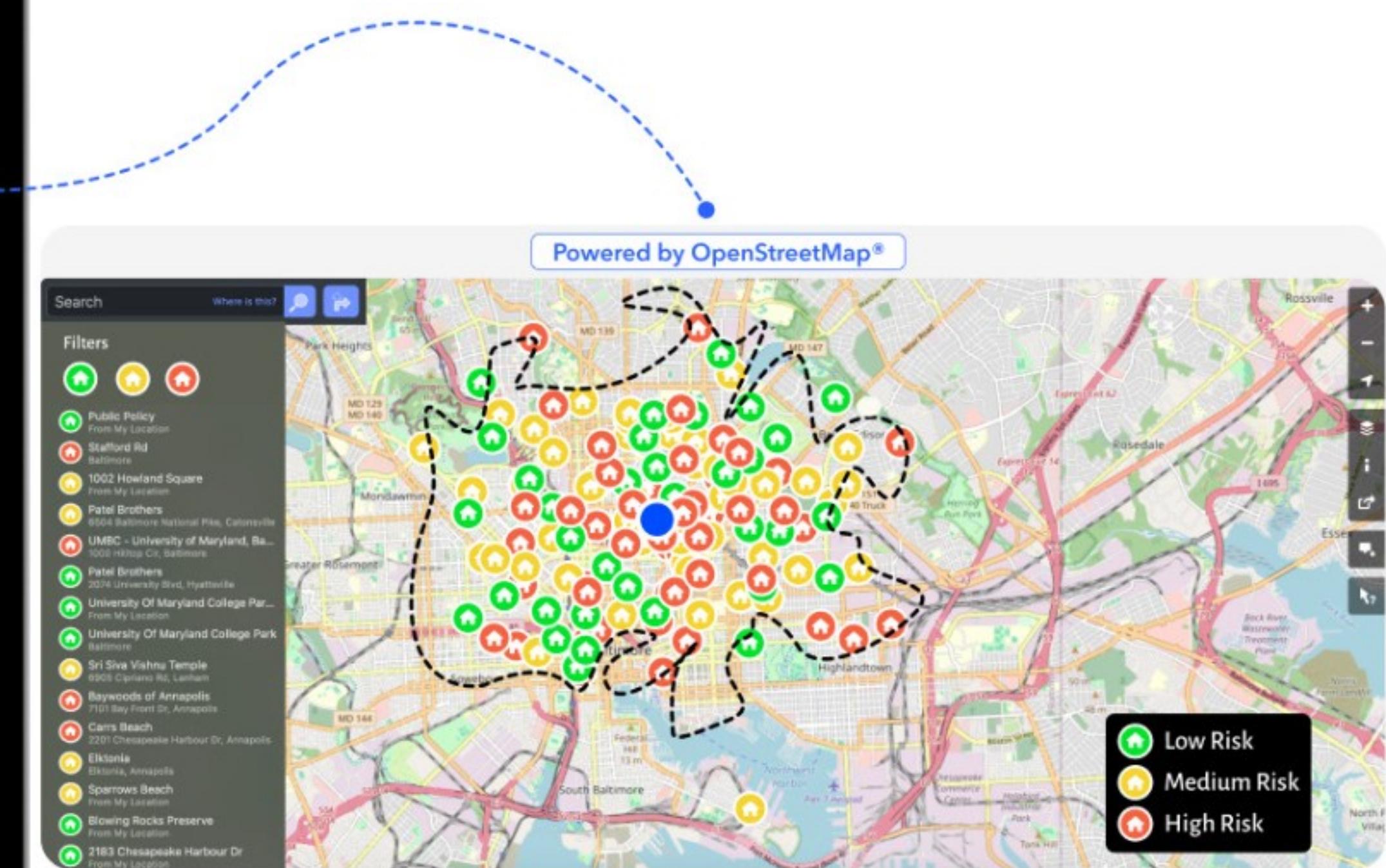
Individual **Edit Appointment**
feature for customization

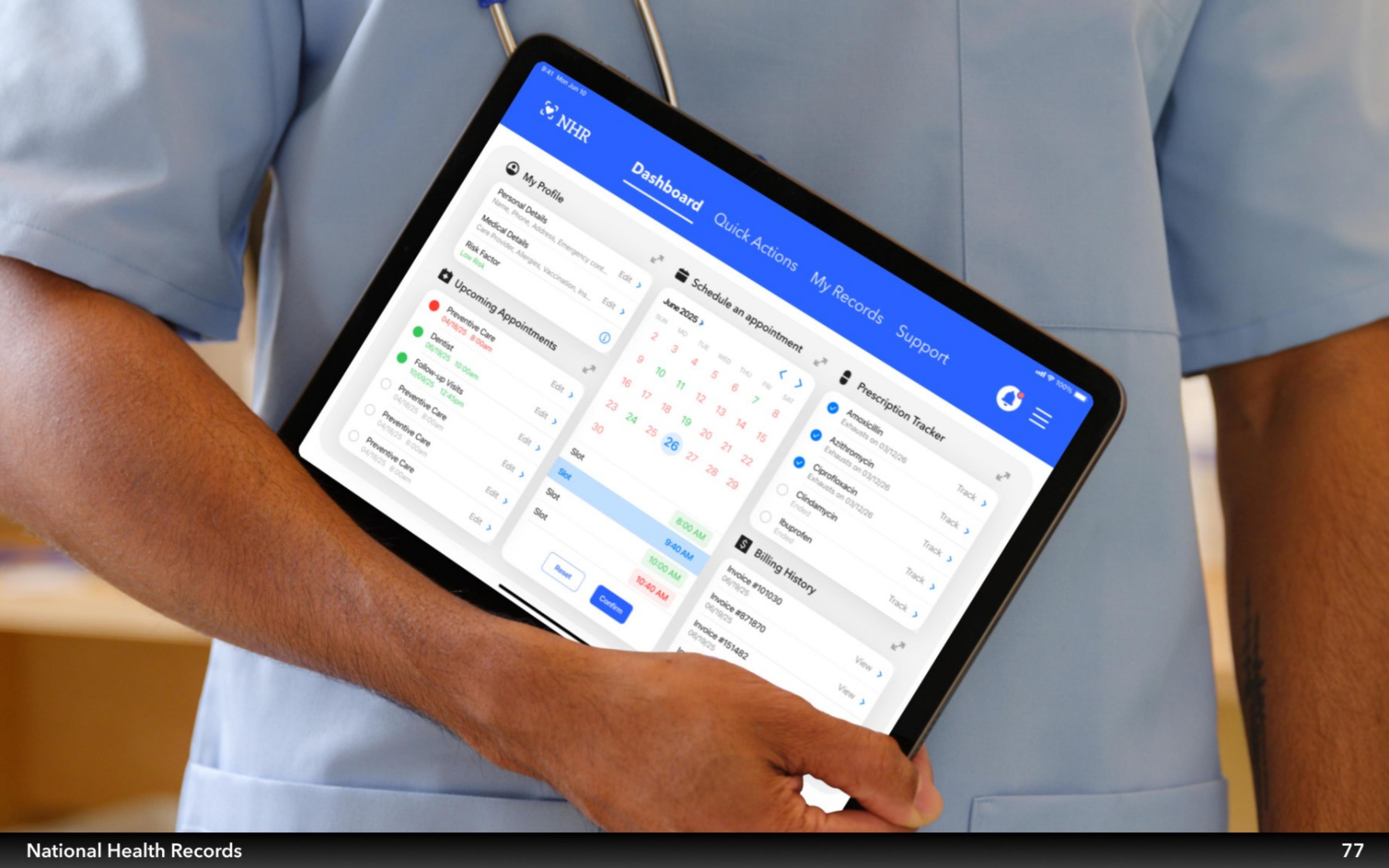
This screenshot shows the 'Edit Appointment' feature for patient 'Skylar Ekstrom Bothman' on 04/18/25 at 8:00am. The interface has tabs for 'Details' (selected) and 'Notes'. In the 'Details' tab, there are sections for 'Diagnosis' (with a dropdown menu), 'Symptoms' (with a search bar and a list of checked symptoms: Aches and pains, Breathlessness, Cough, Dizziness, Eye irritation), and 'Prescriptions' (which is currently empty). In the 'Notes' tab, there is a large text area containing handwritten notes: 'PATIENT: S.E.B', 'DATE: 2025-03-25', and a list of symptoms and observations: '• ANNUAL CHECKUP. PT SAYS SHE'S FINE.', '• BP 120/80, HR 72', '• NAD. RRR ABD SOFT.', '• KEEP DOING WHAT YOU'RE DOING! LABS: CBC, CMP, LIPIDS. FU IN 1 yr'.

Patient Records

A screenshot of a mobile application interface titled "CHR". The top navigation bar includes "Dashboard", "Quick Actions", "Patient Records" (which is the active tab), and "Support". A "Geo Mode" toggle switch is located in the top right corner. Below the navigation is a search bar with a microphone icon. The main content area displays a table of patient records with columns: Name, ID, Phone, Address, Age, Gender, Blood Type, and Risk Factor. The risk factor column uses color-coded buttons: green for "Low Risk", red for "High Risk", yellow for "Medium Risk", and blue for "Low Risk" (repeated). The table contains 12 rows of data.

Toggle between **Geo Mode**
for a comprehensive geographic view





2025

UX design Portfolio

Thank You!

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