

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

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

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.



Phone

+1 (646) 318-9495



Mail

stavate1@umbc.edu



LinkedIn

/sarthaktavate



Behance

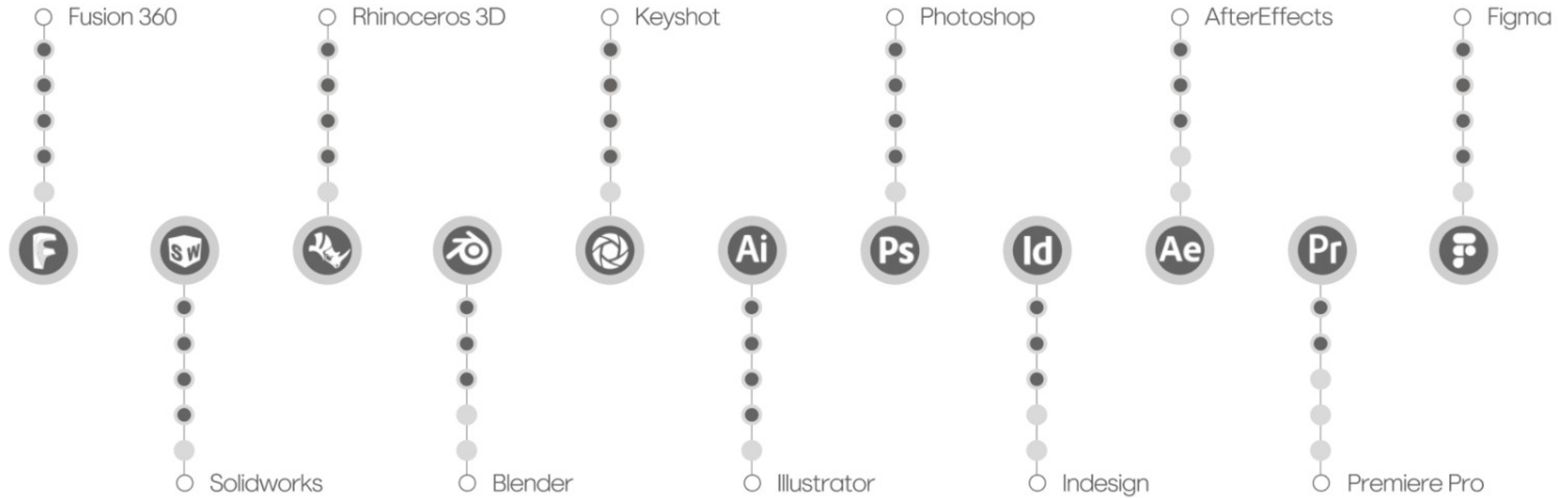
/sarthaktavate



Website

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

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



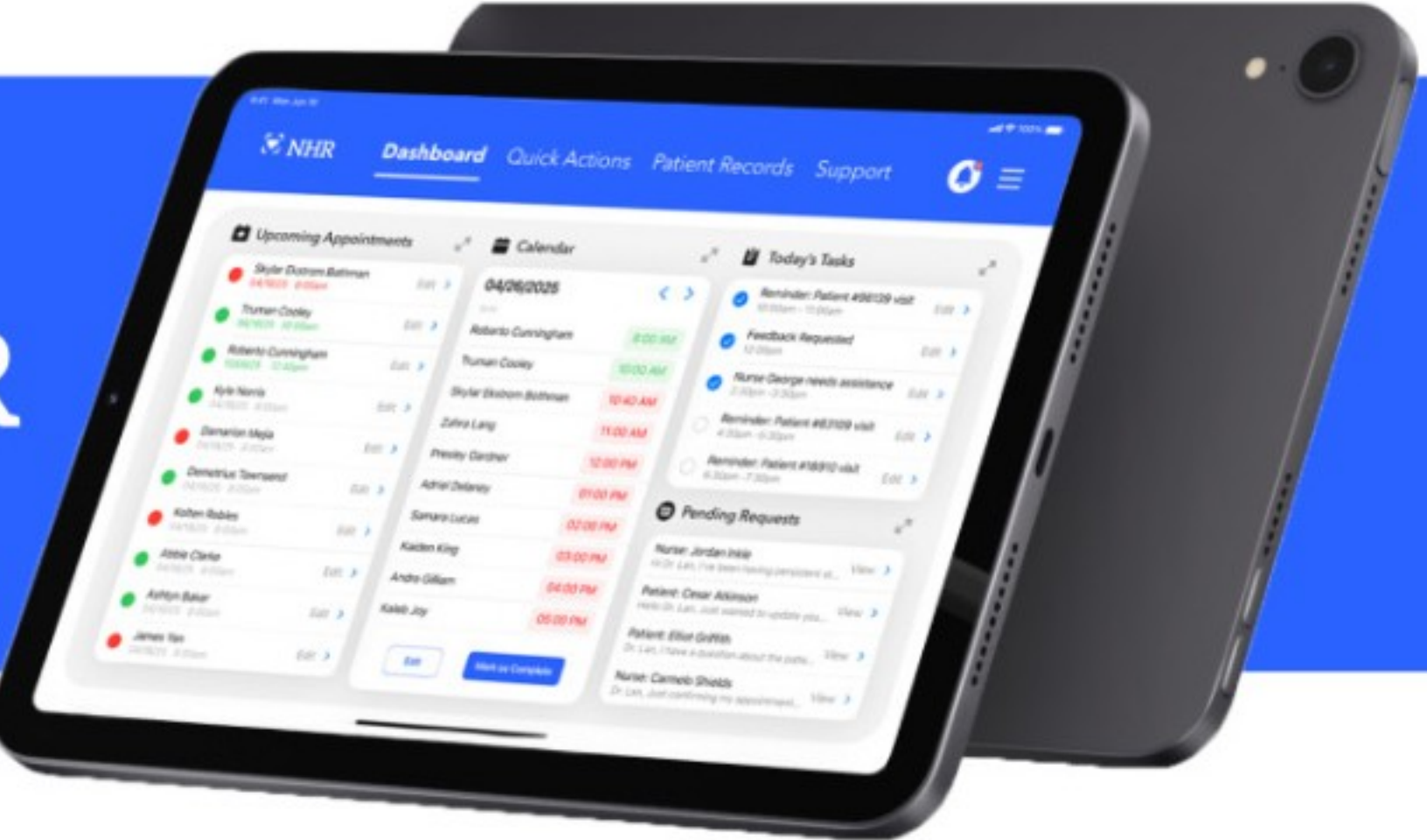
101



Content



Contents





101



Disc over

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

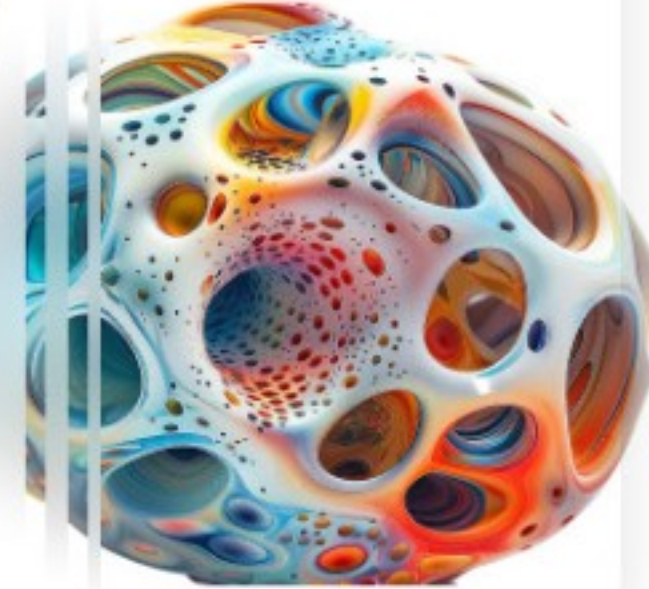


Psychological

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

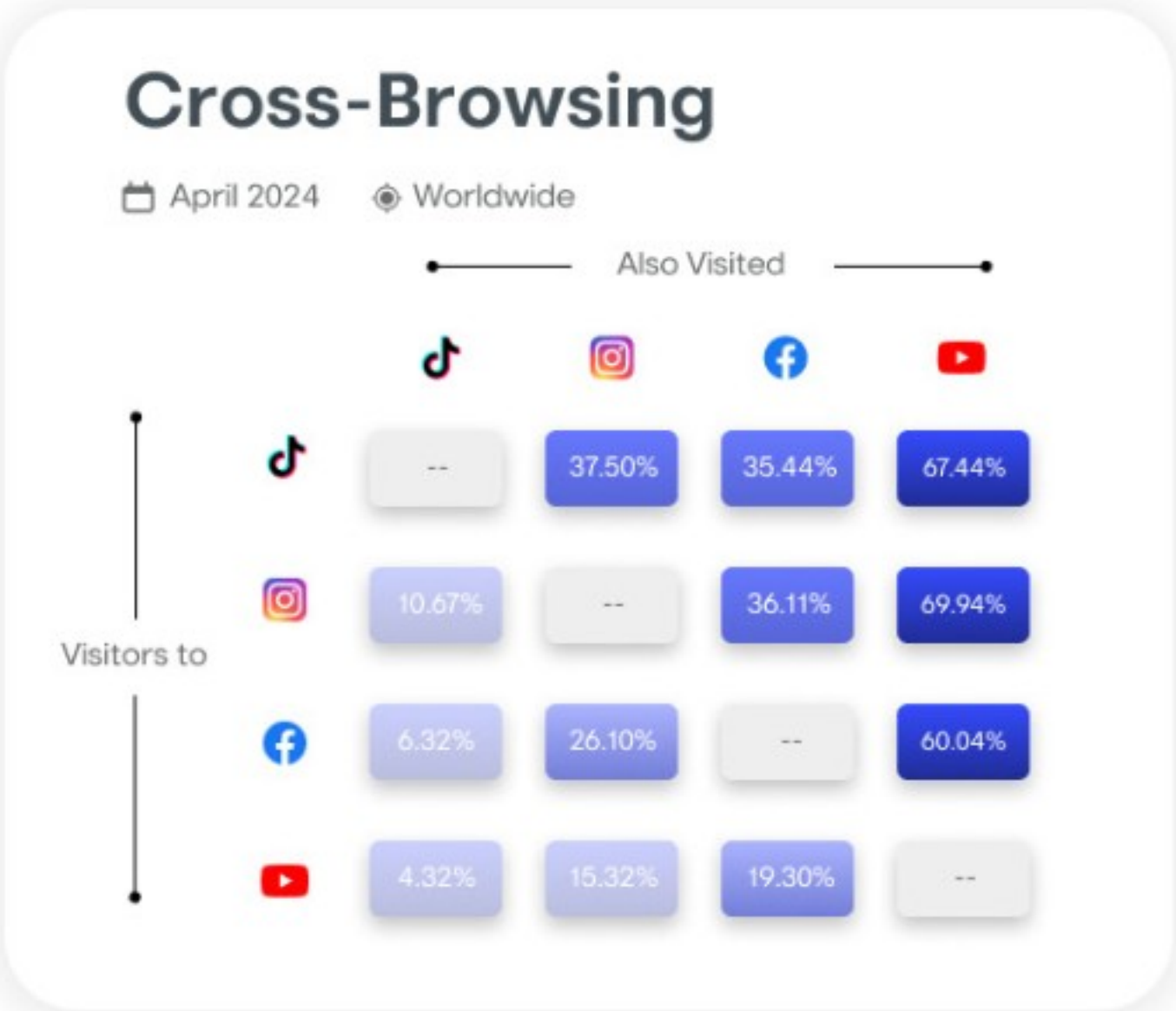
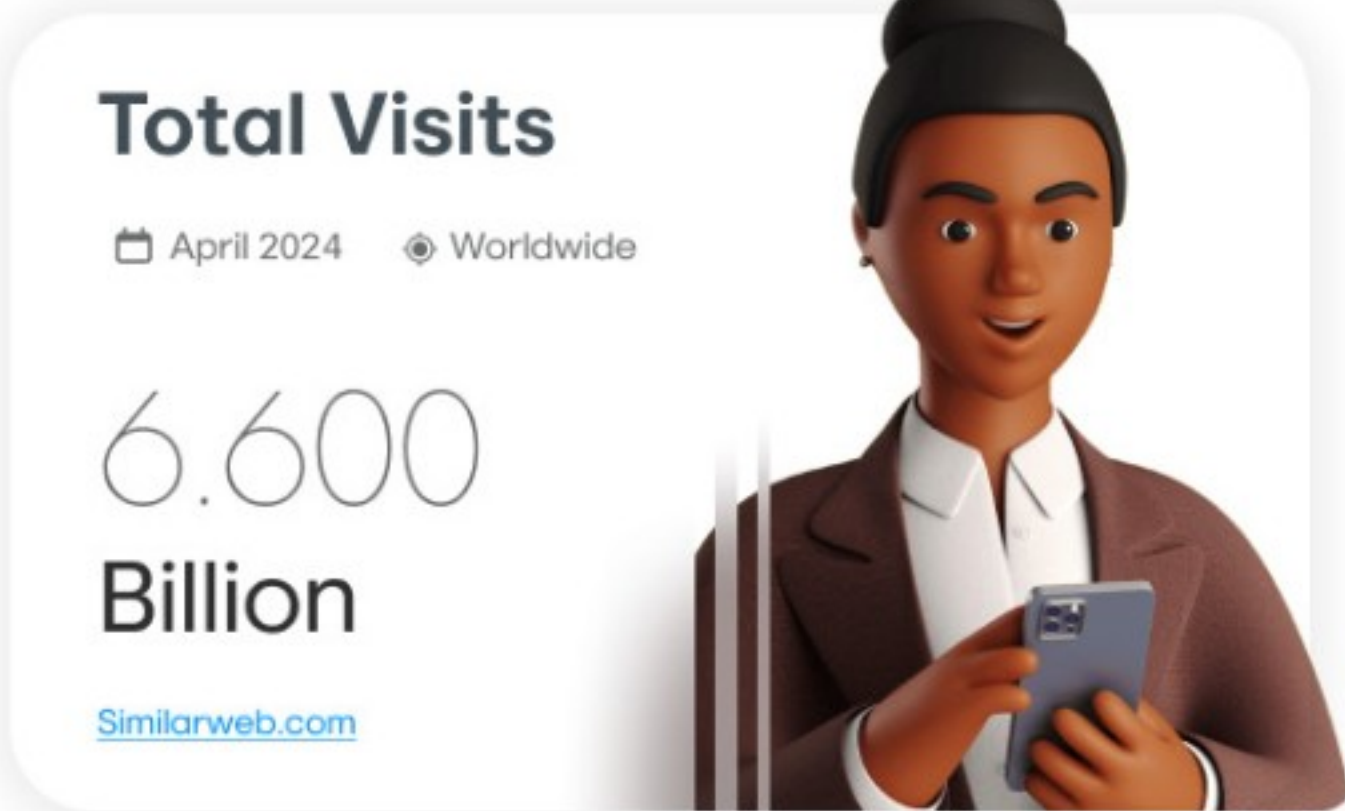
Creators & Virality

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



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](#)



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](#)



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](#)



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](#)



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](#)



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](#)



Revenue

1. Advertisements in various forms.
2. In-app purchases enhancing user experience.
3. Brand partnerships and sponsorships.
4. Sponsored content and challenges.

[Wikipedia](#)



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.



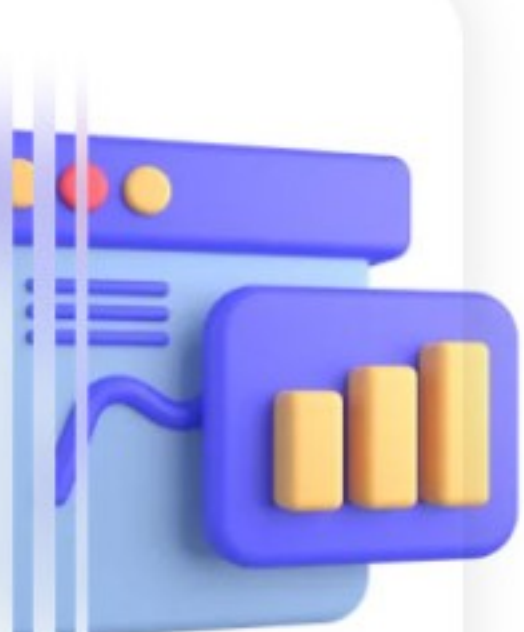
Interactions

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



About

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

Skills

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

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.

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,

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.

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.

EXPERIENCES

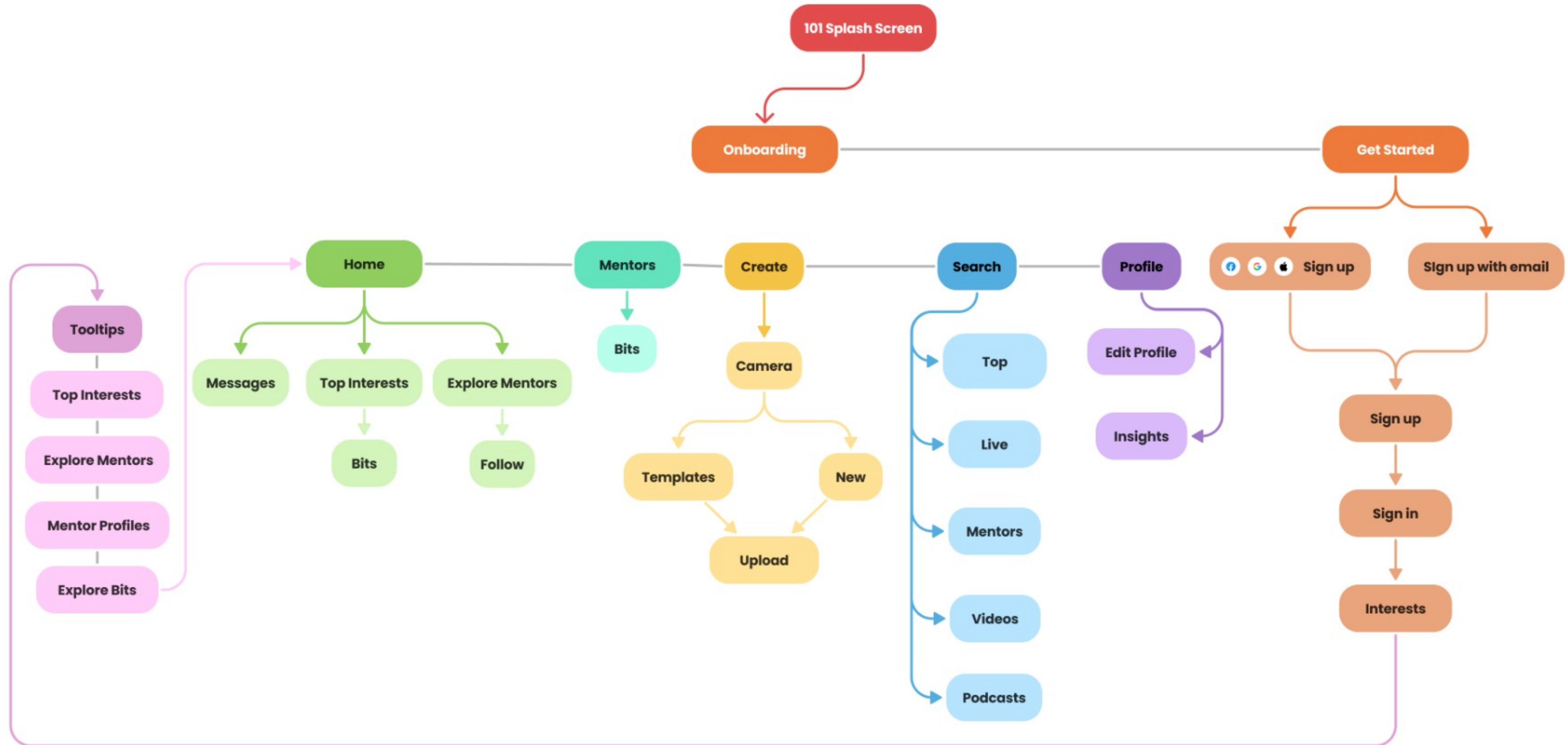
- 😞 Janera had a unpleasant experience of variety of topics of videos when it comes to social media.
- 😞 She has a lot of ambition and does not want social media to distract her.

Moodboard

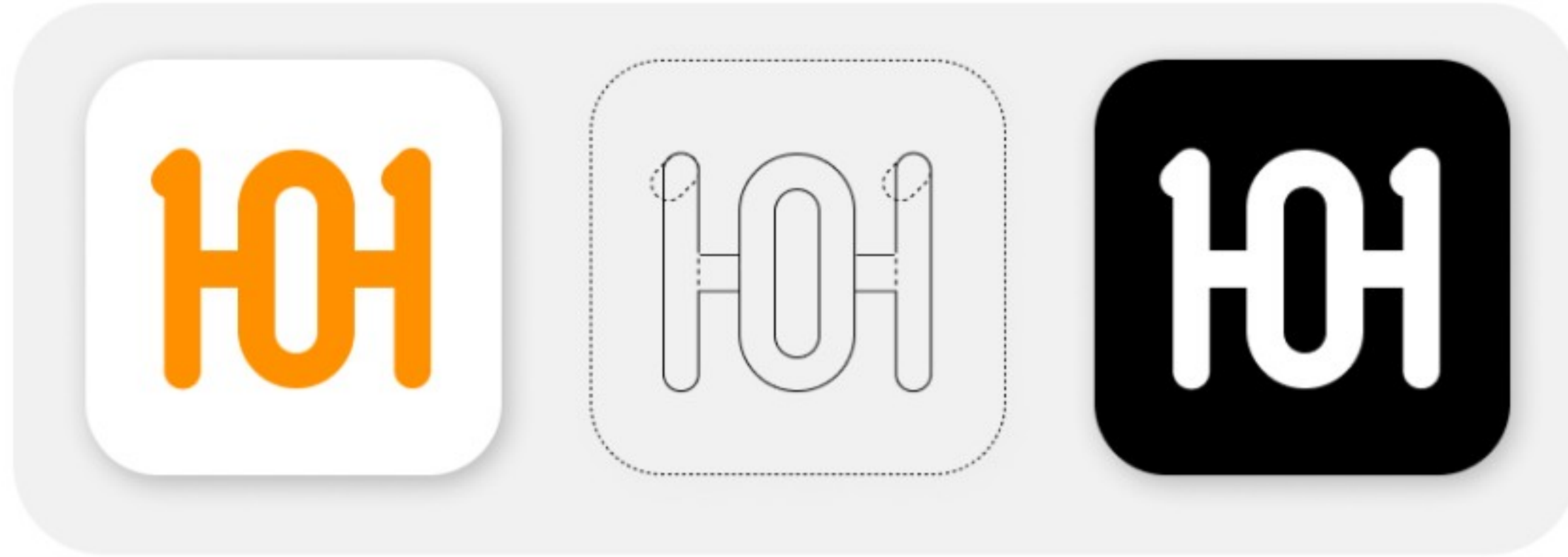


Deliver

Information Architecture



Branding

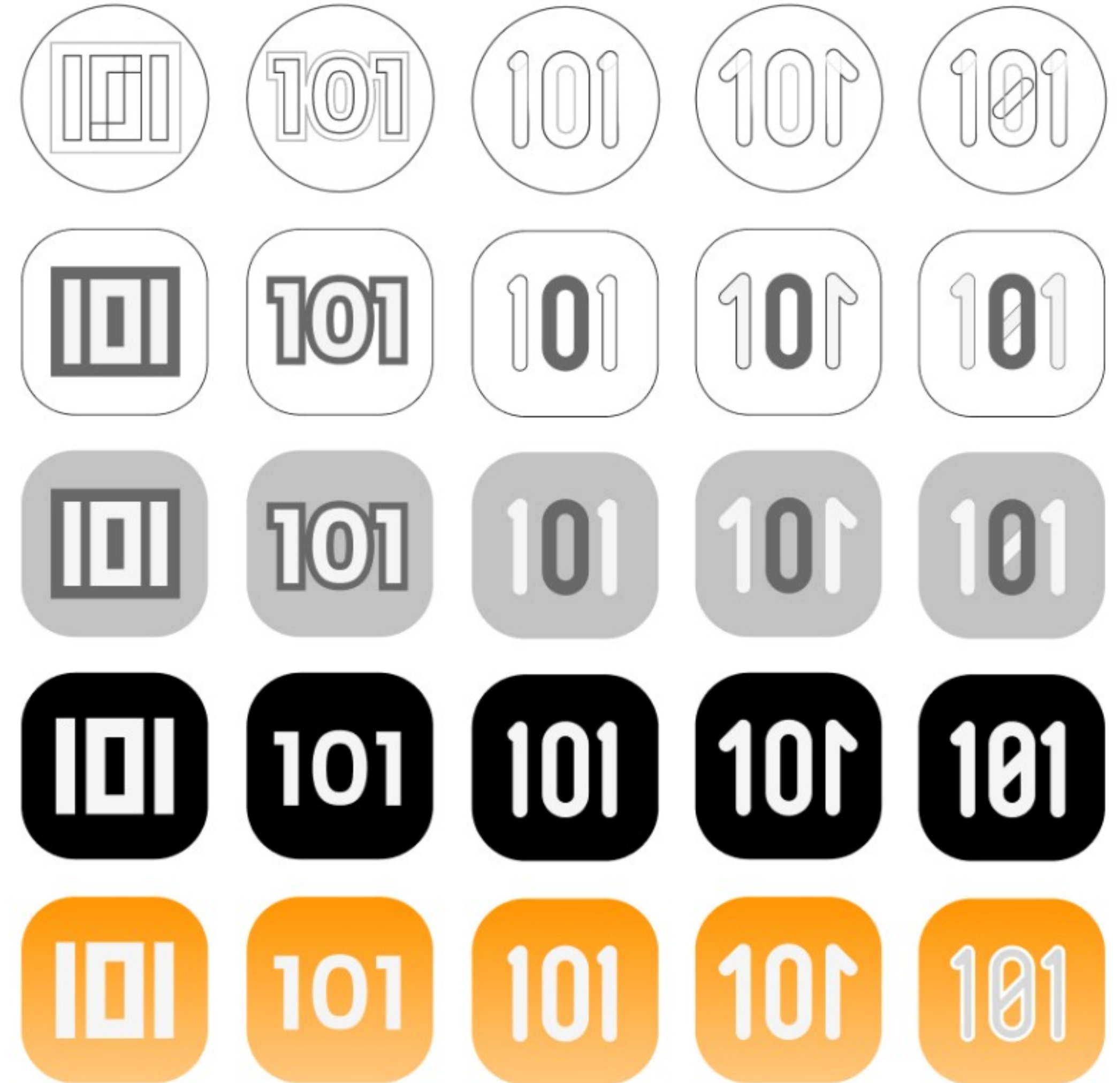


Optimistic • Youthful • Intellectual

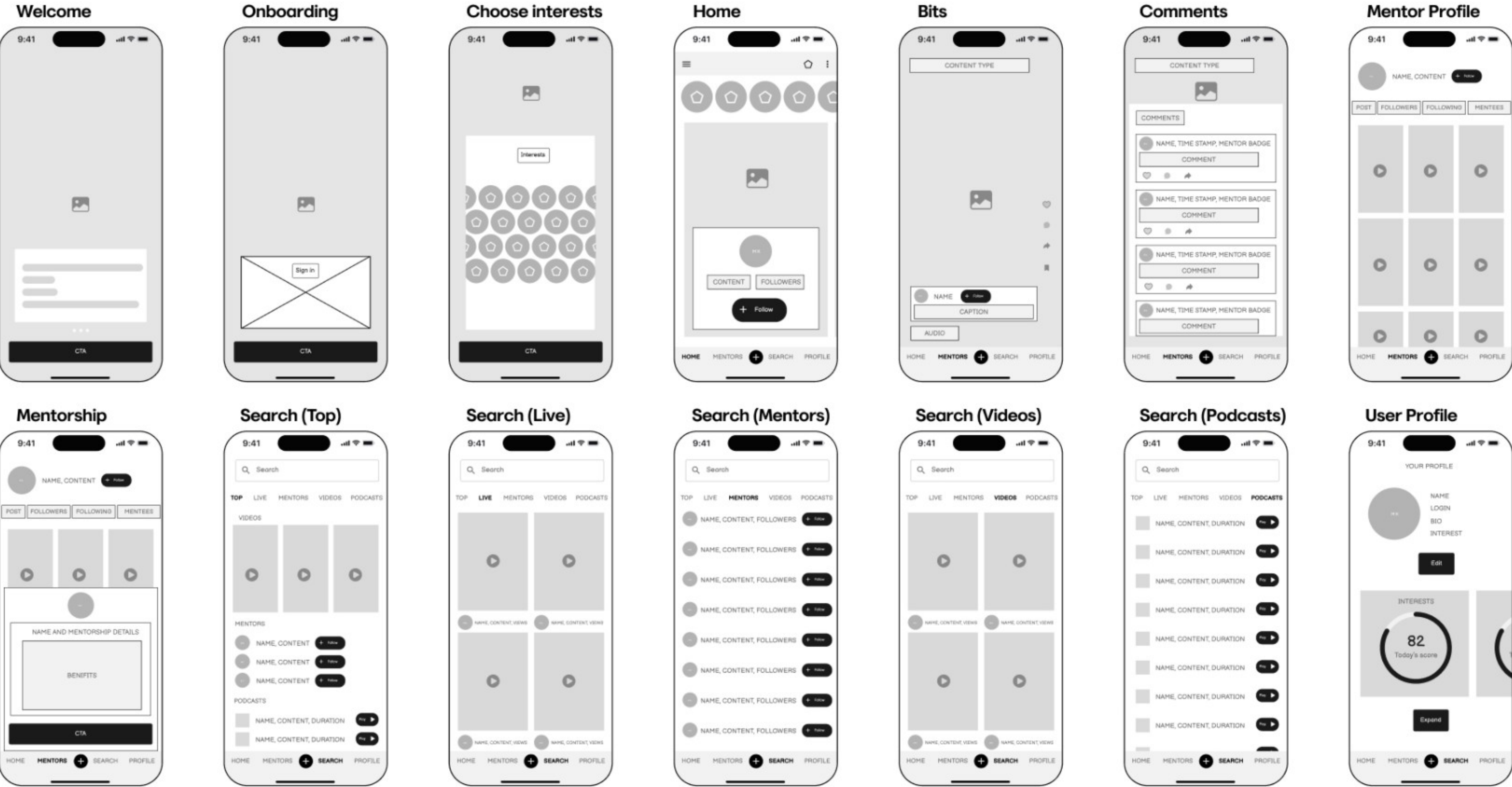
one·oh·one

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

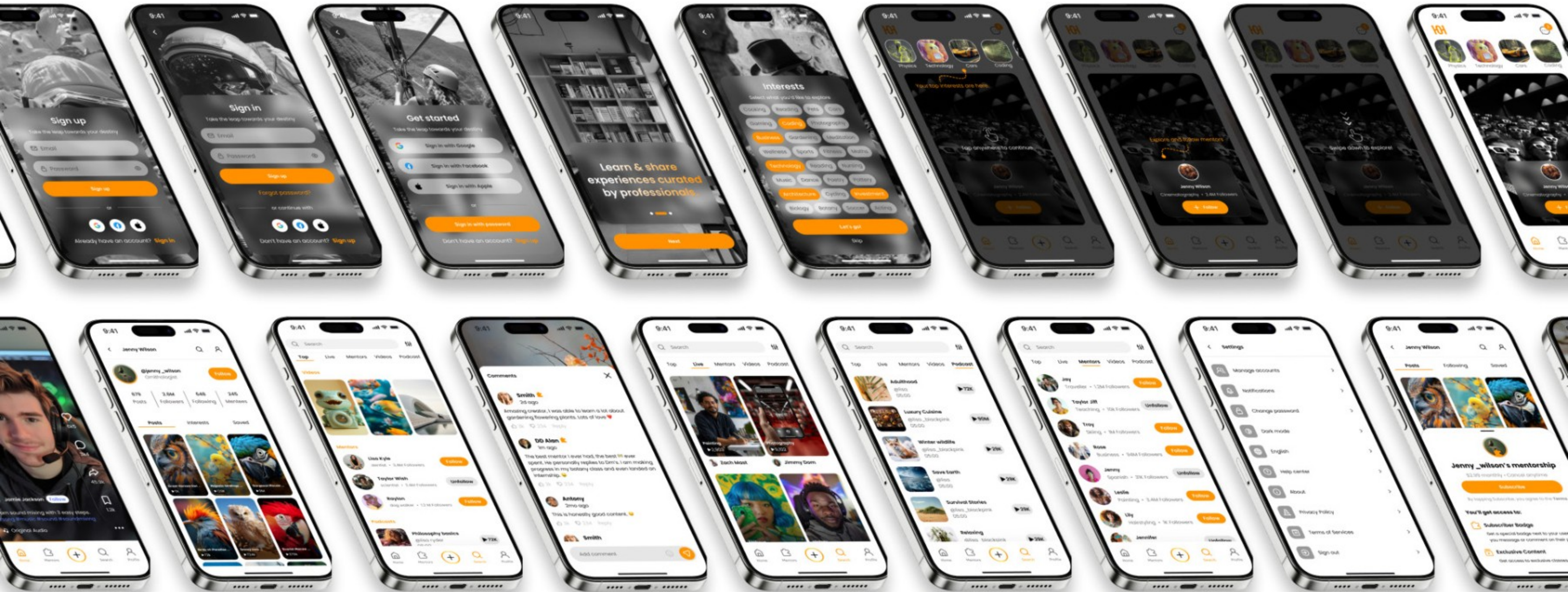
Explore your interests in one oh one place.



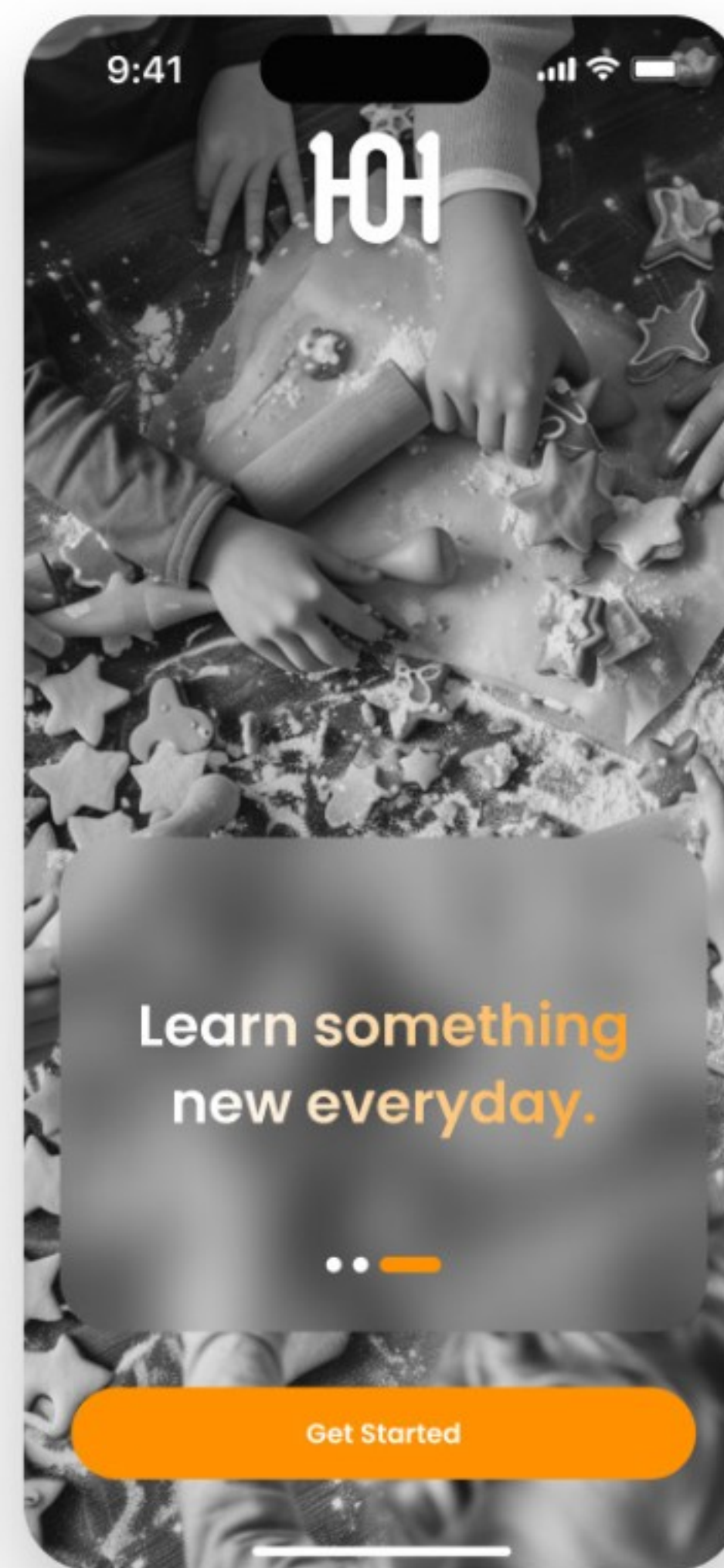
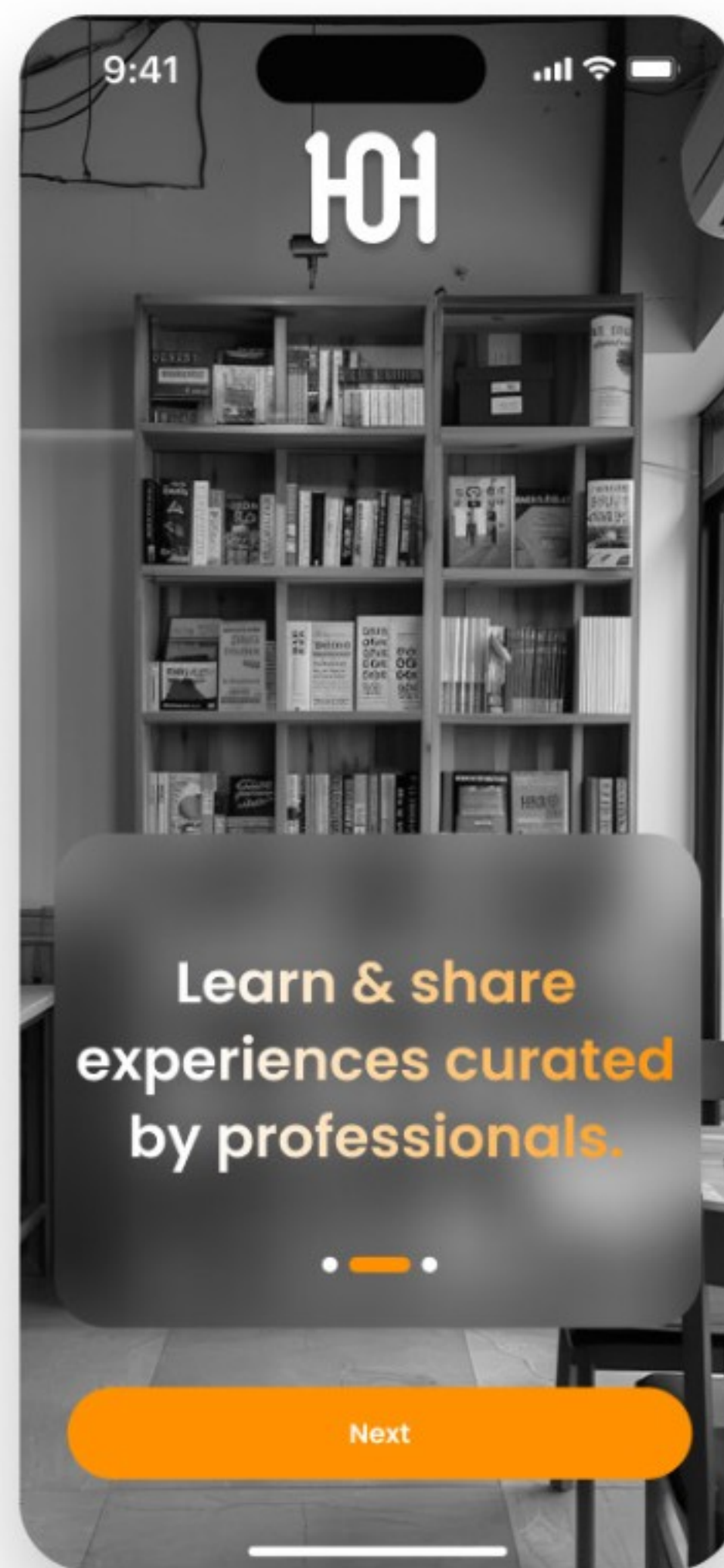
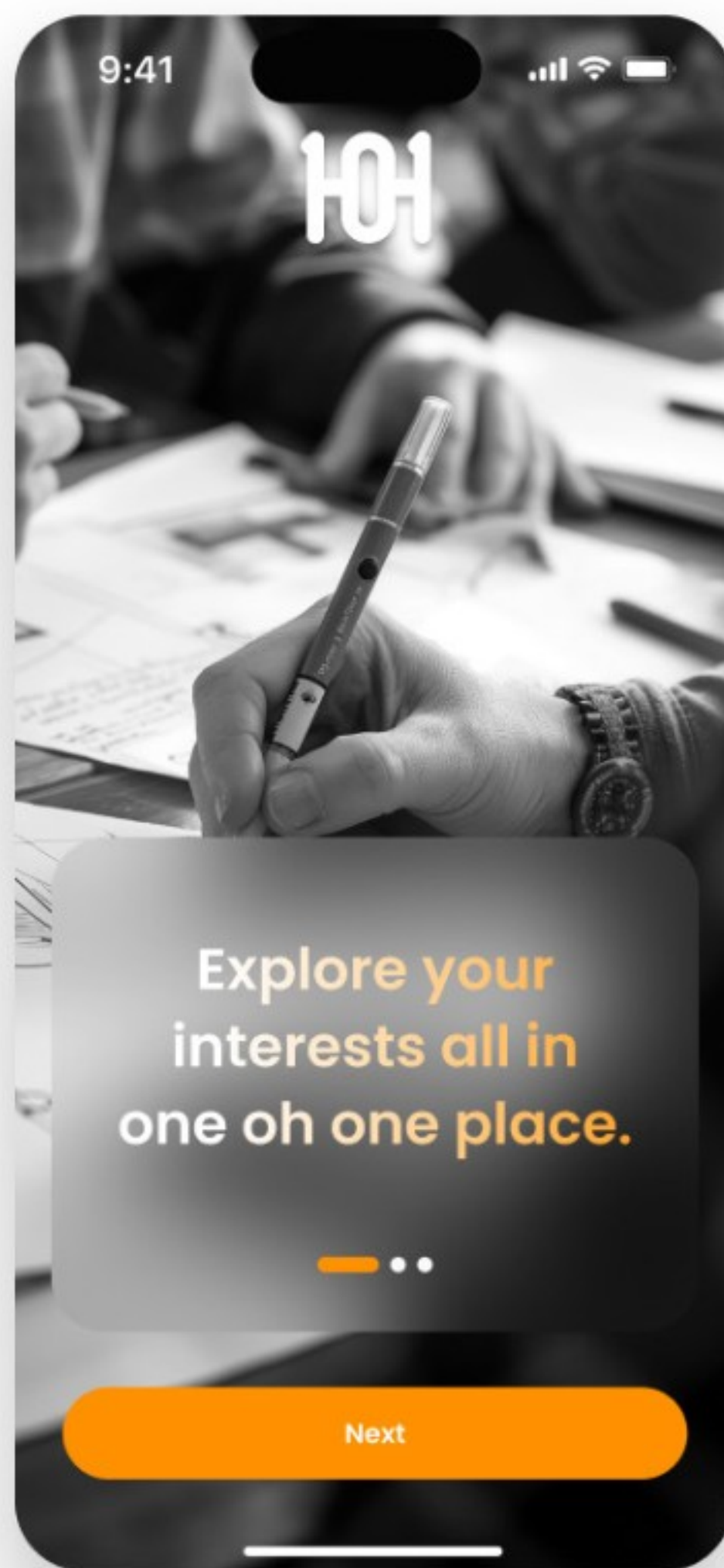
Low-Fidelity Prototype



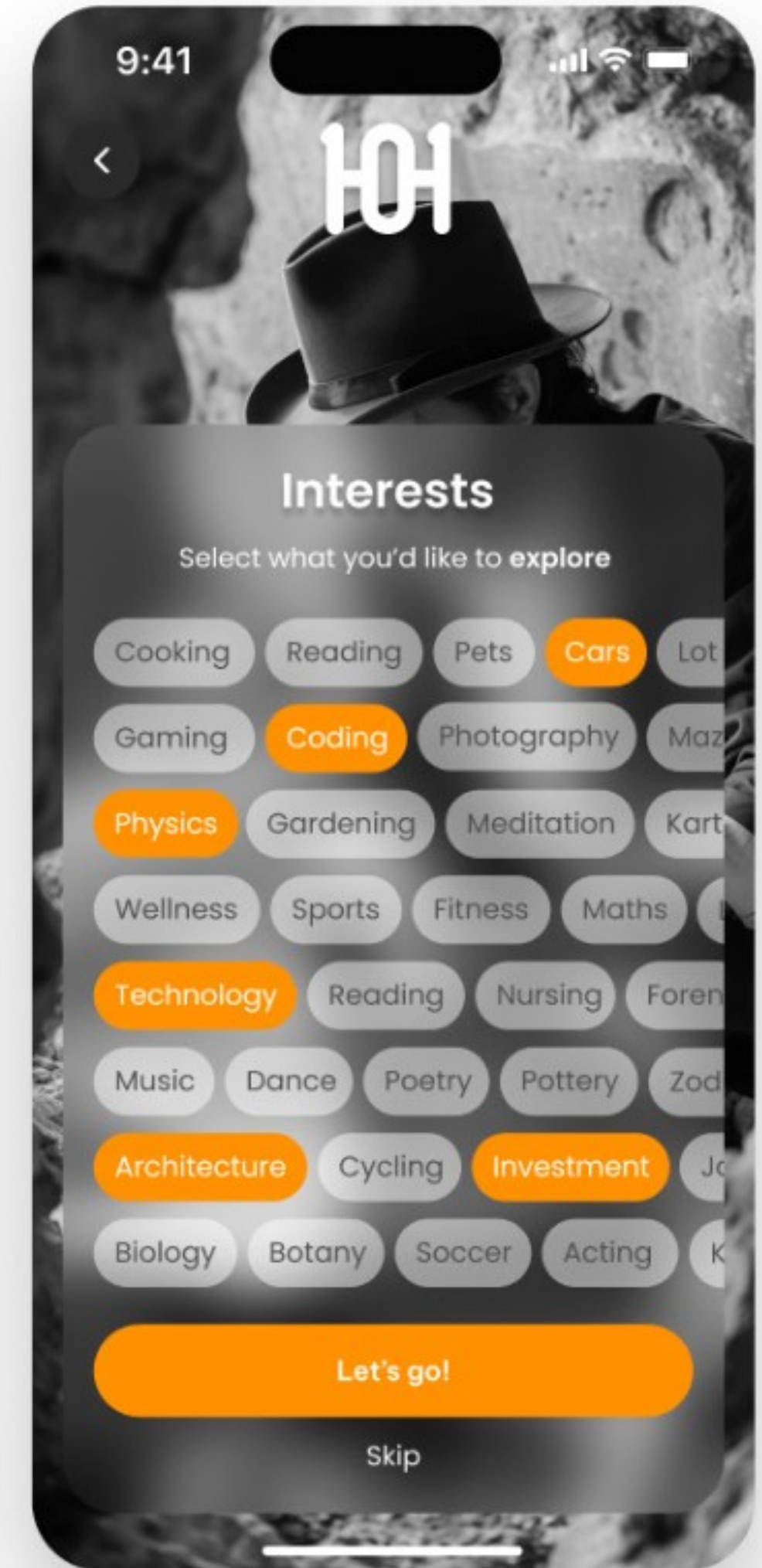
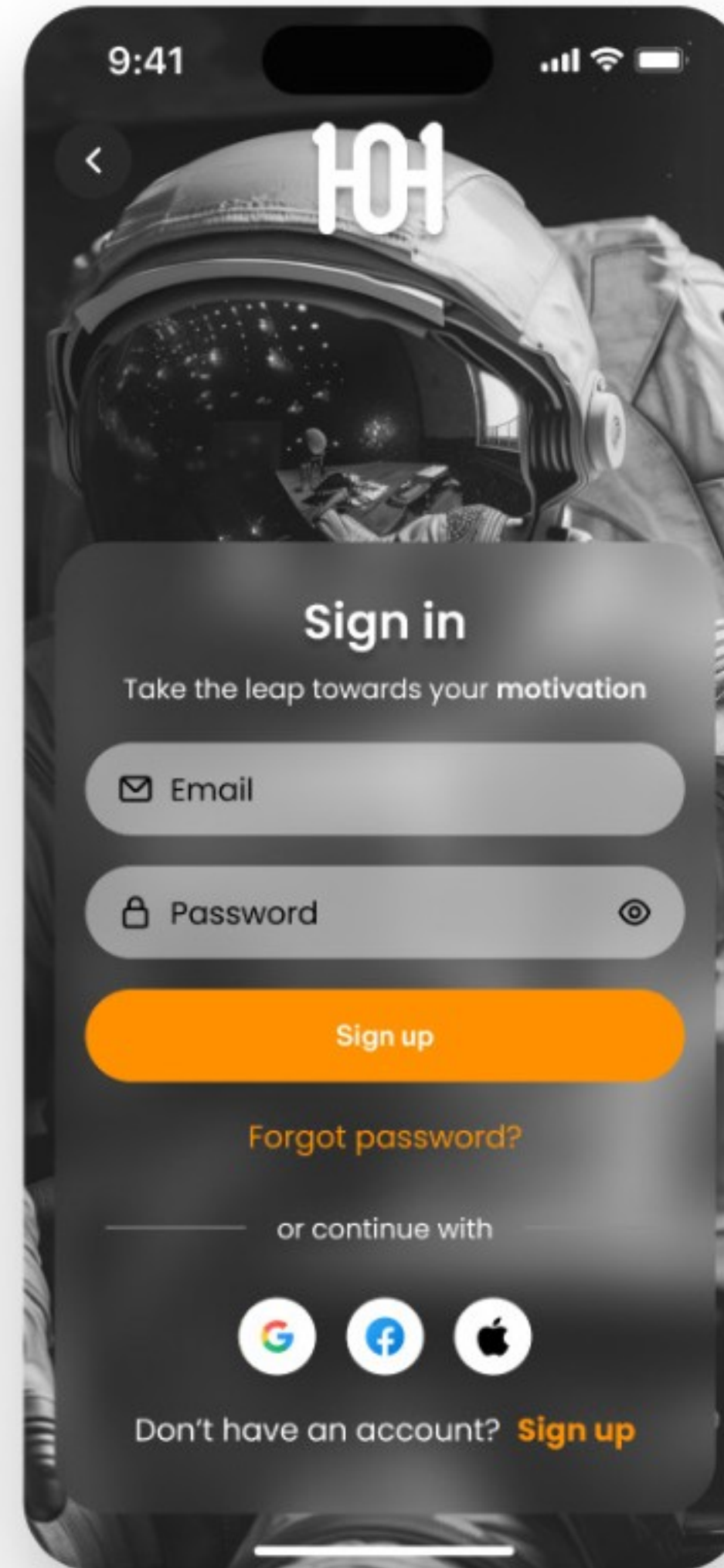
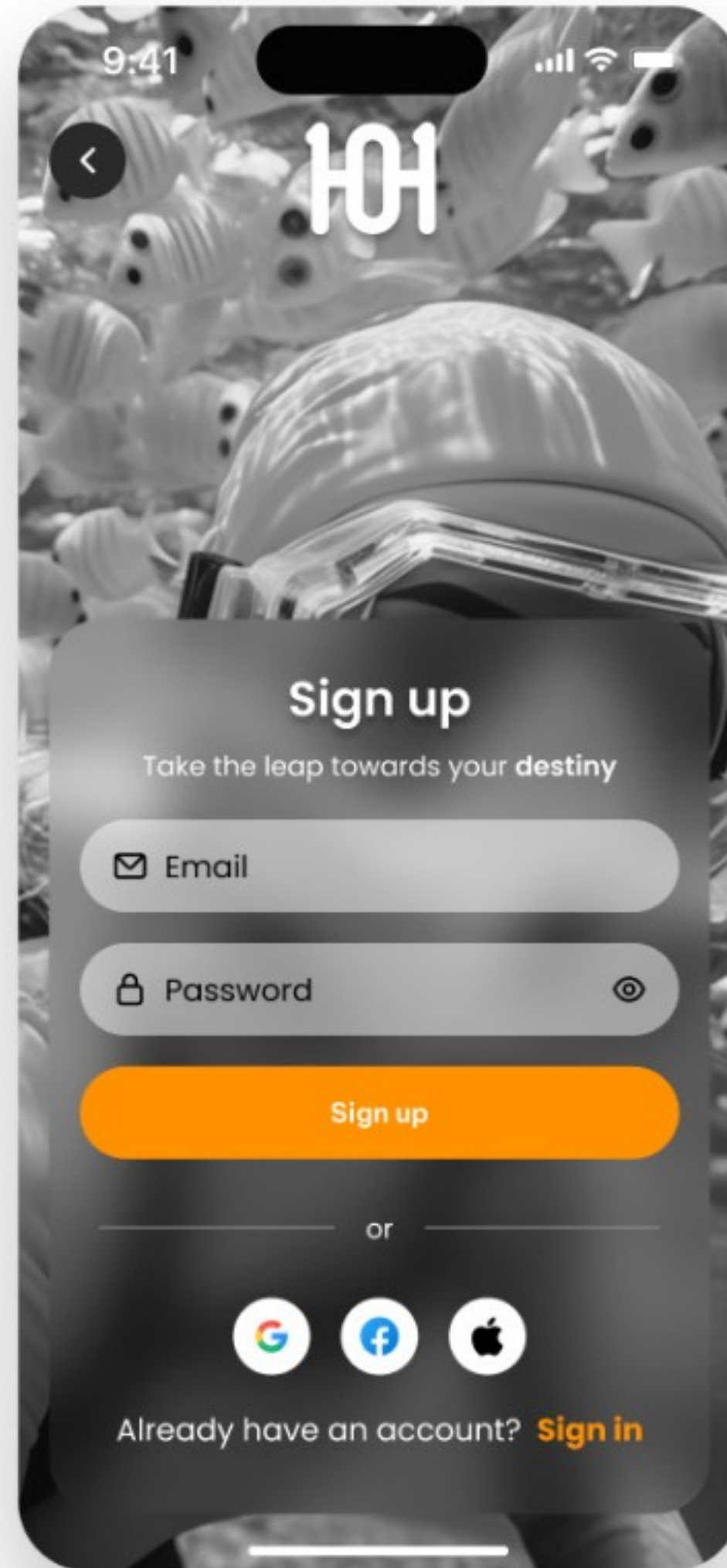
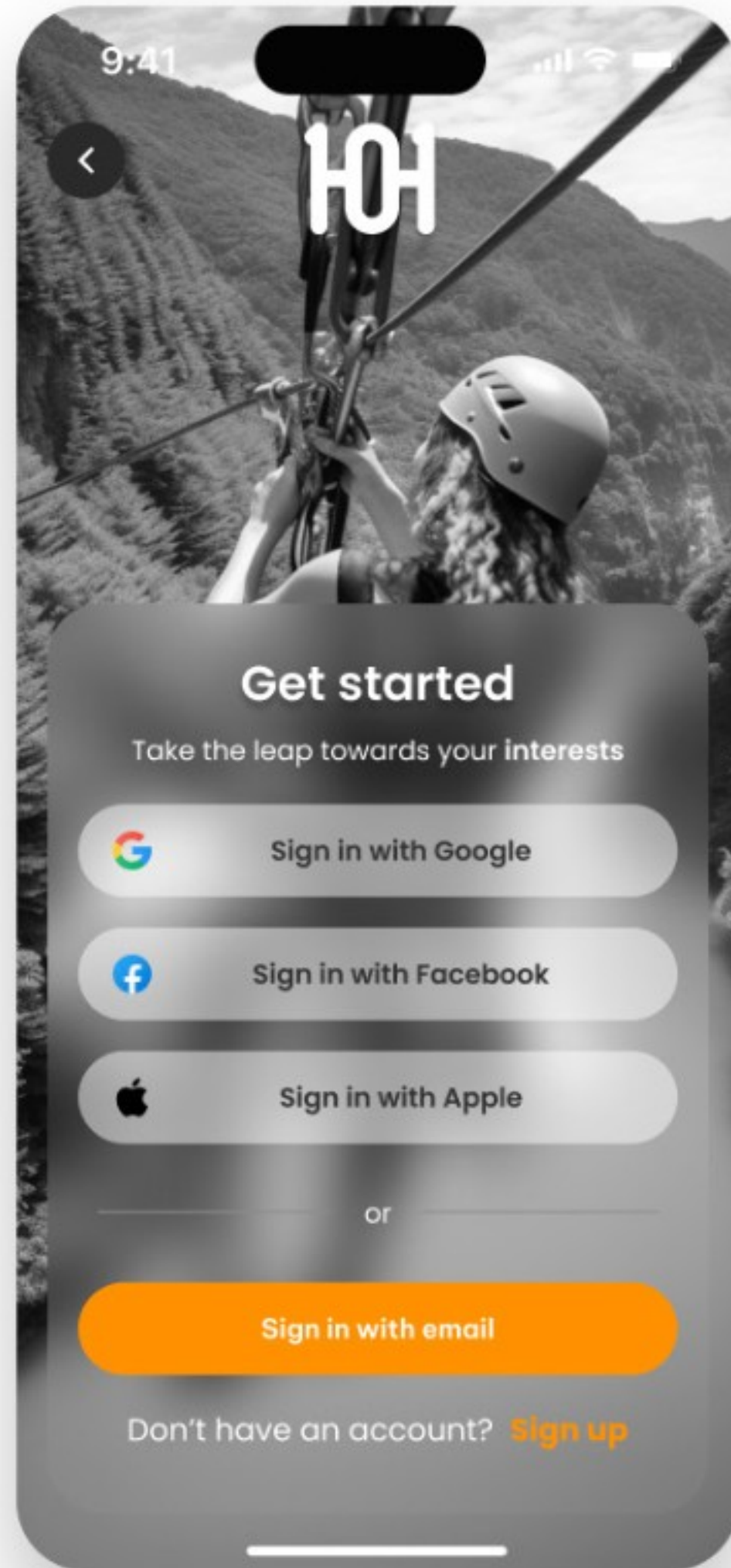
Screens



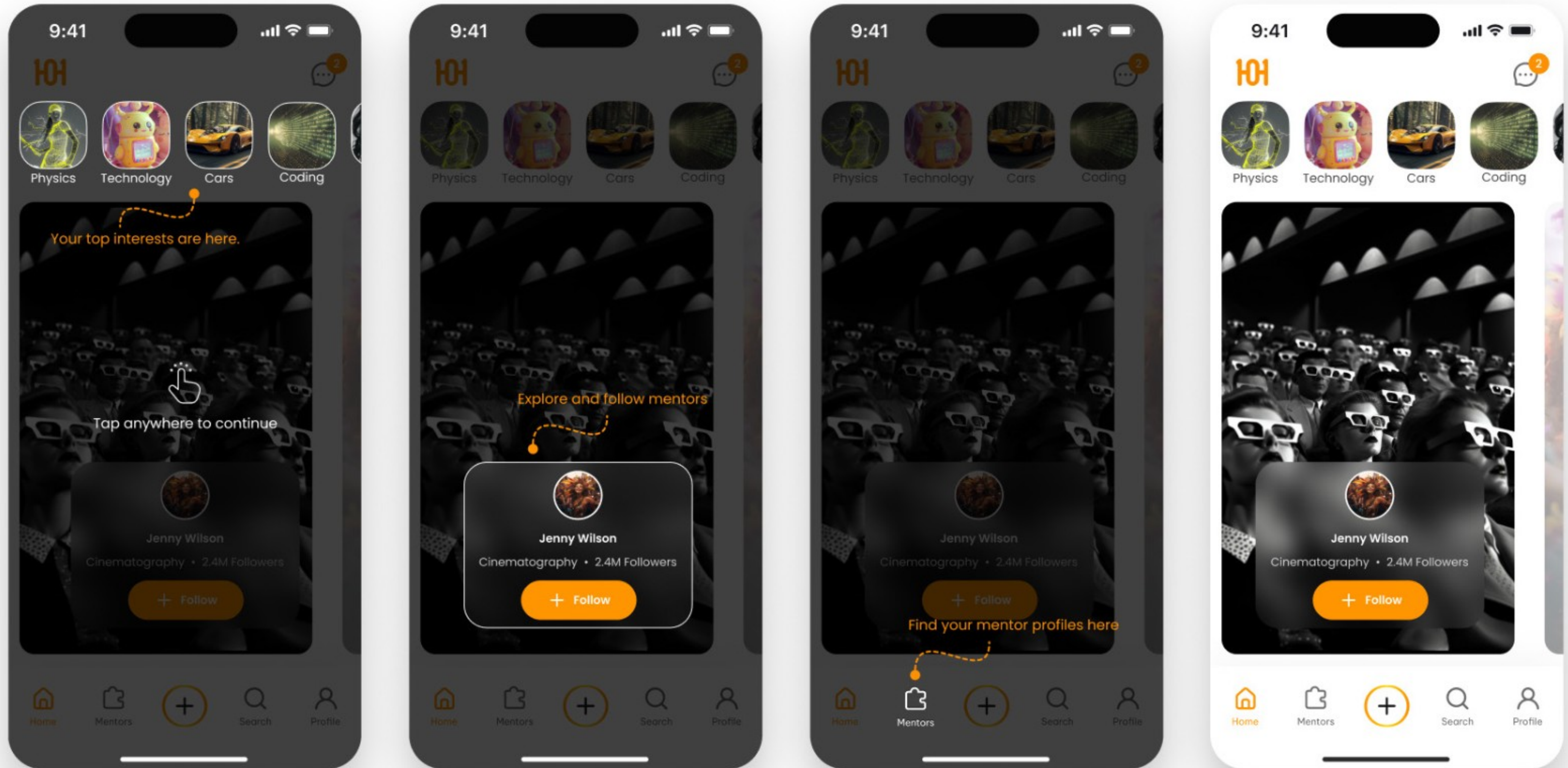
Getting Started



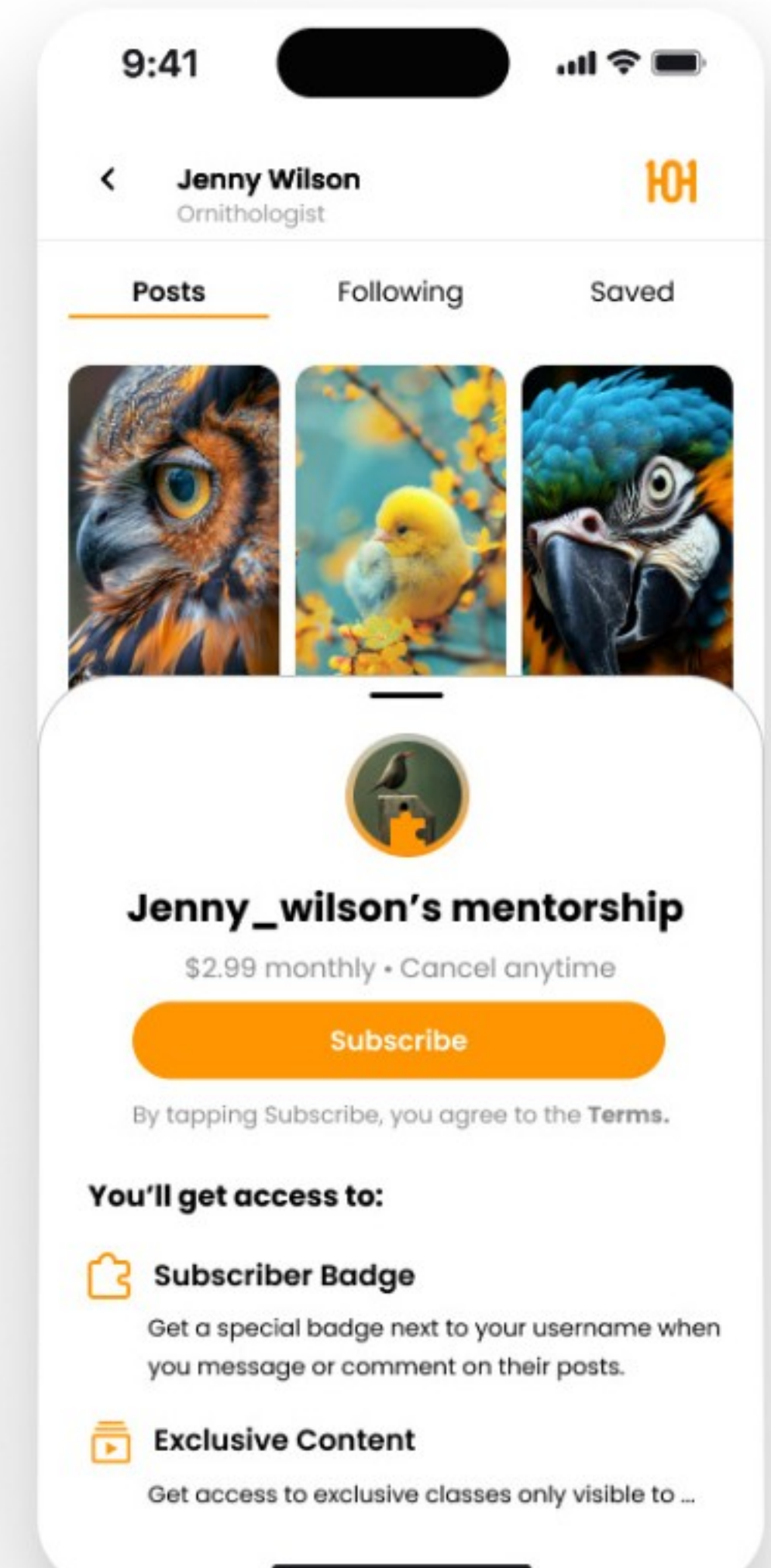
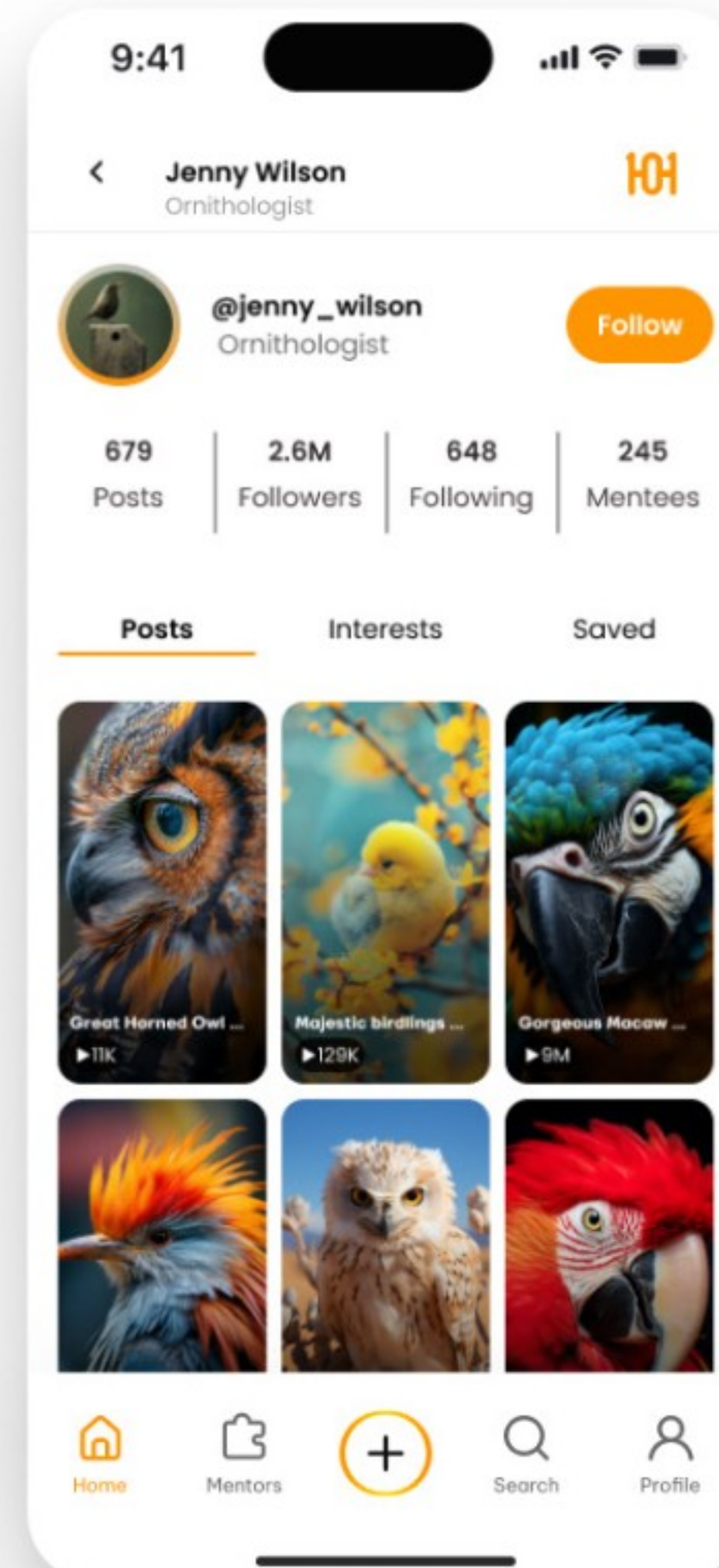
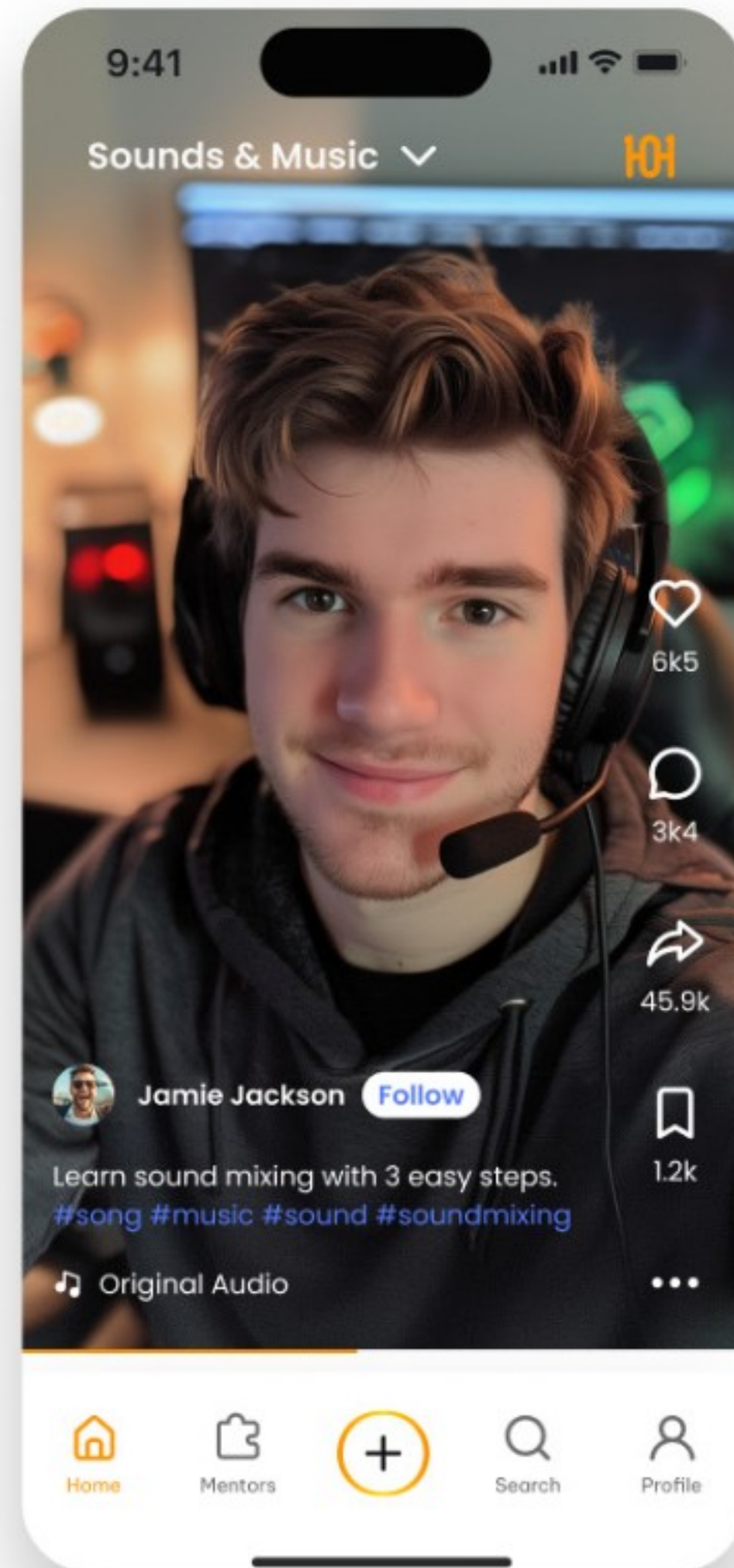
Onboarding



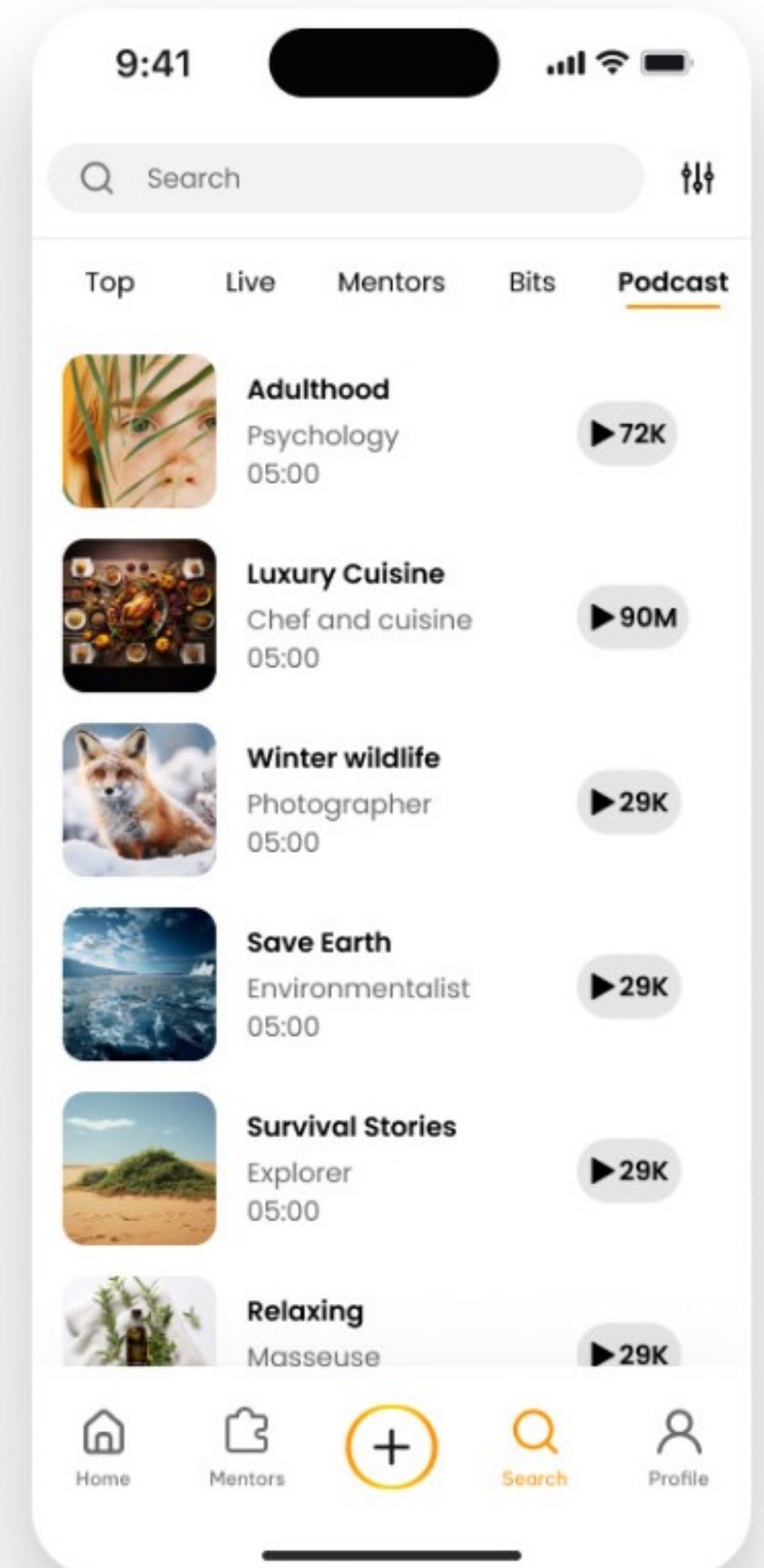
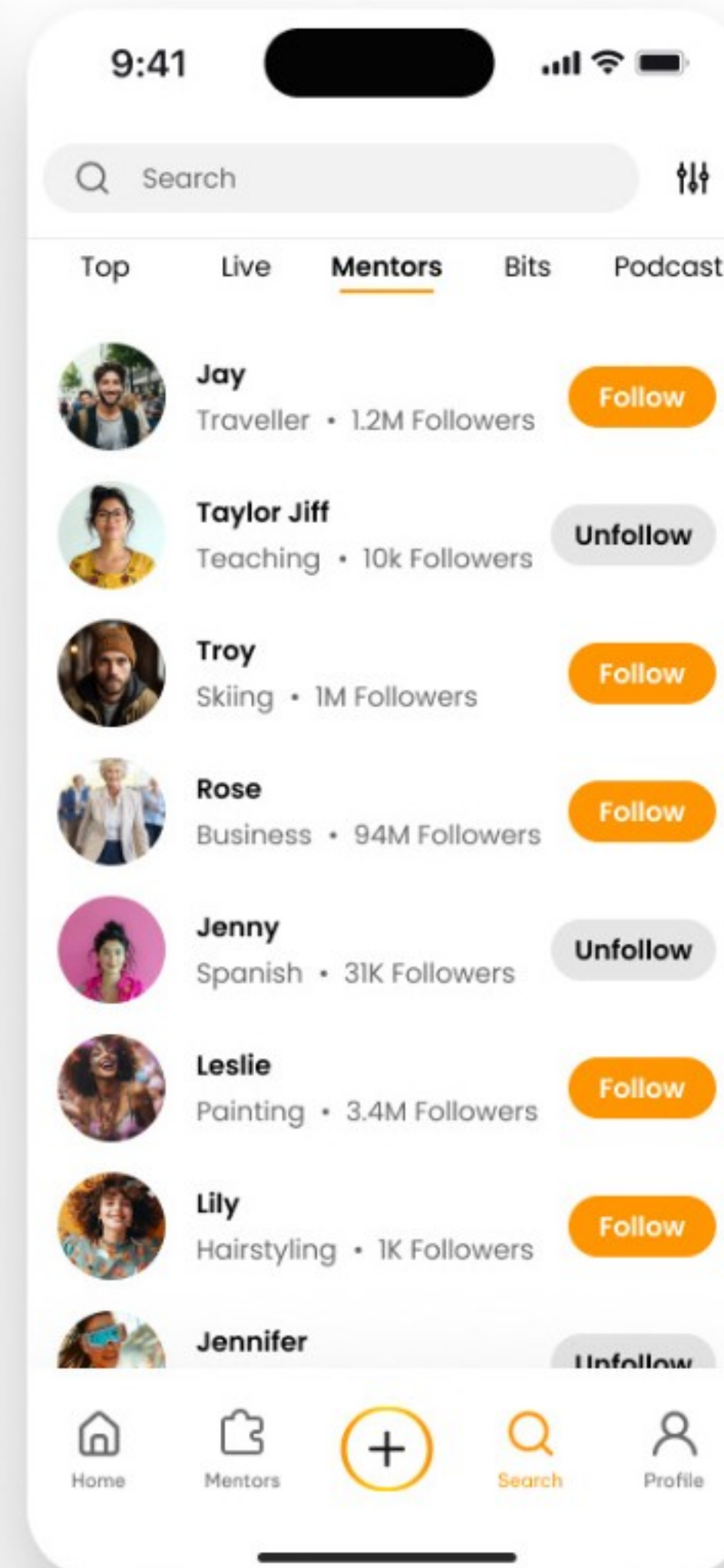
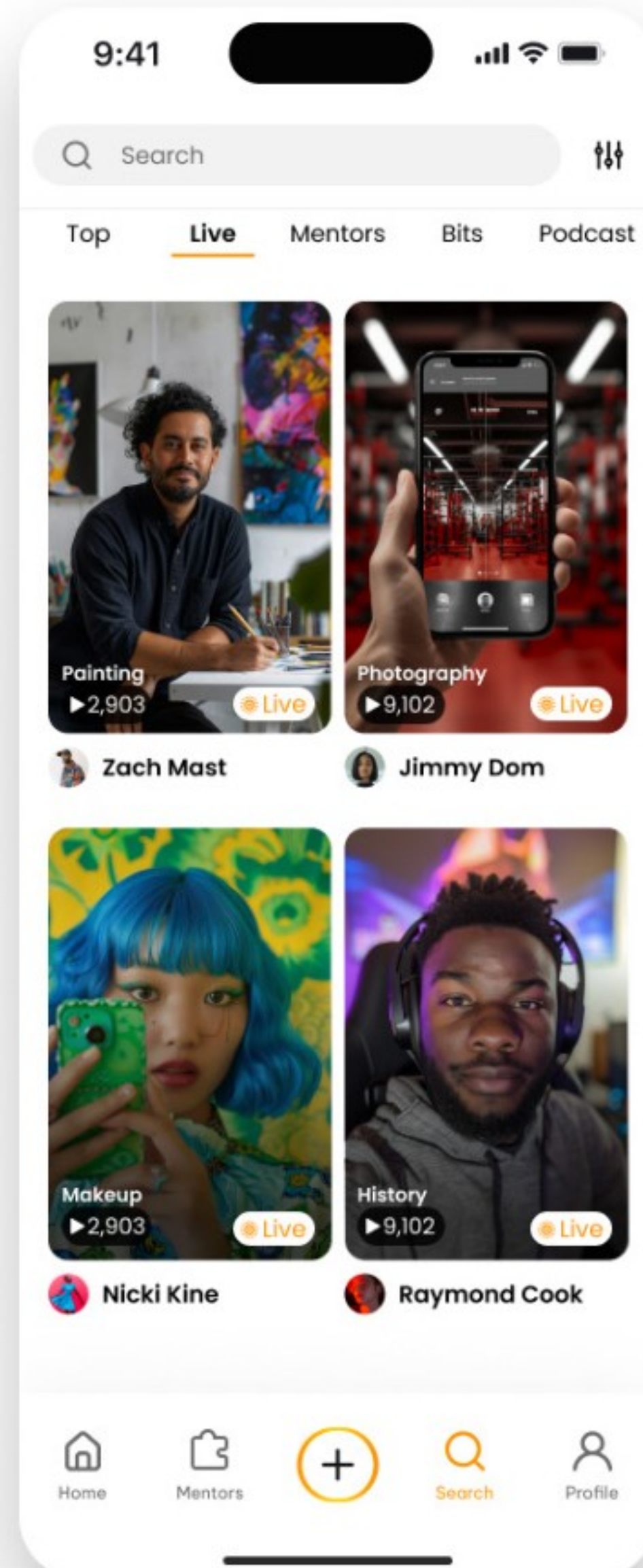
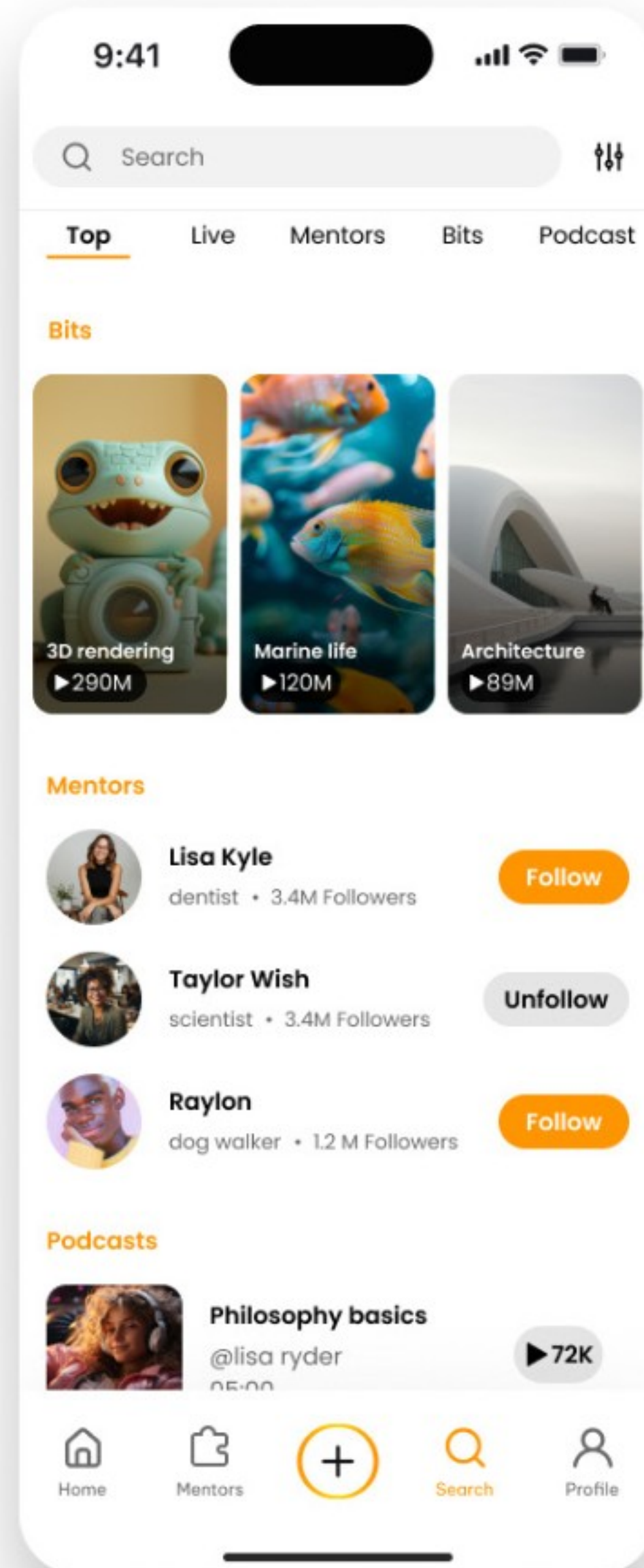
Interactive Tutorials



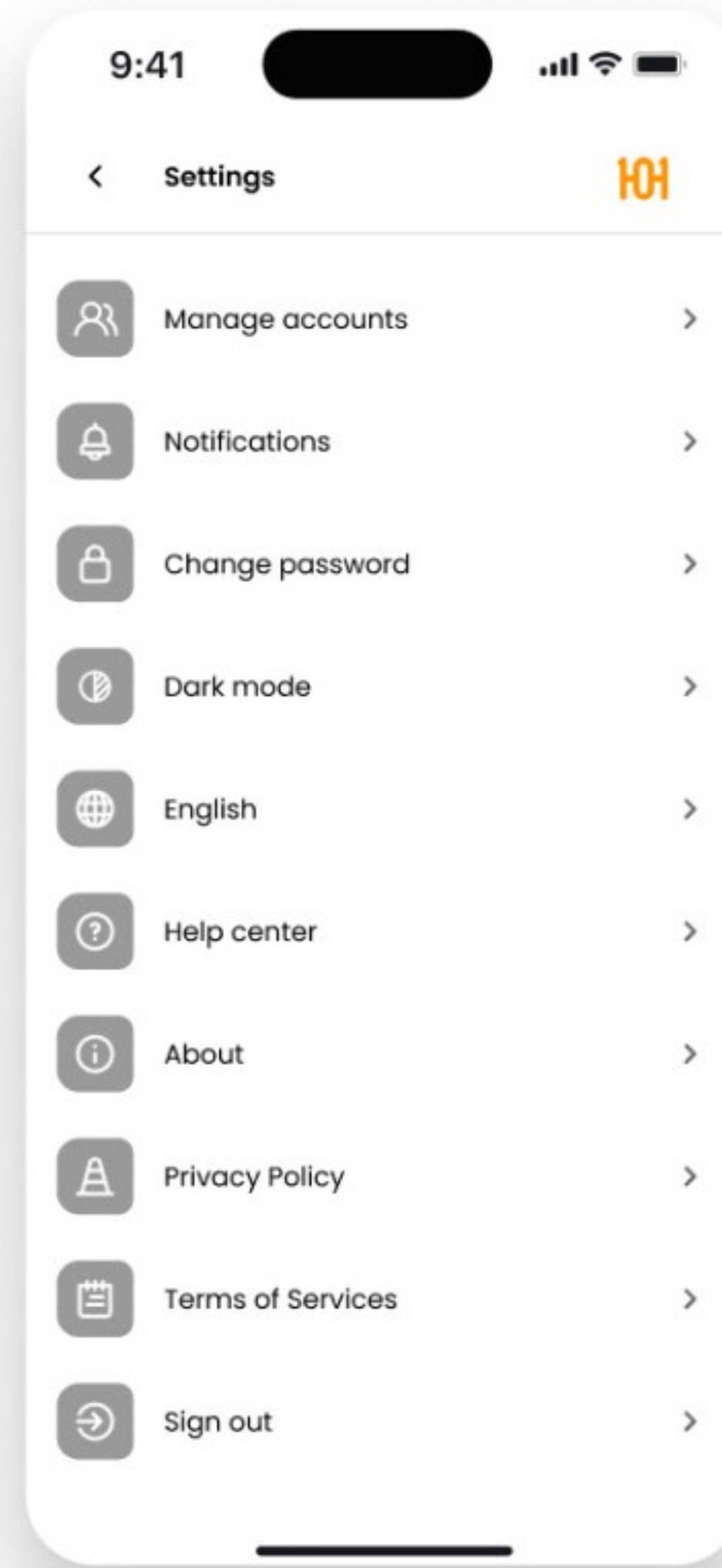
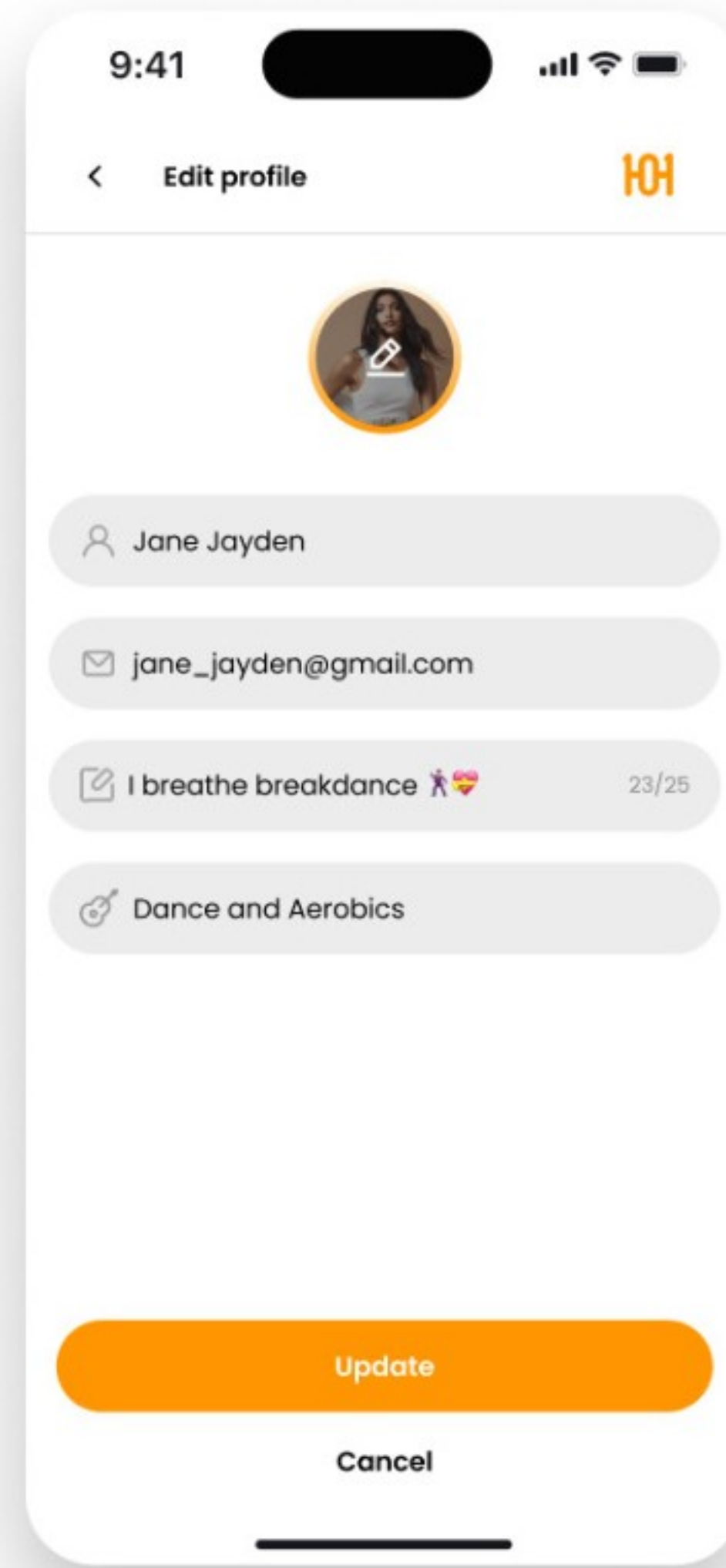
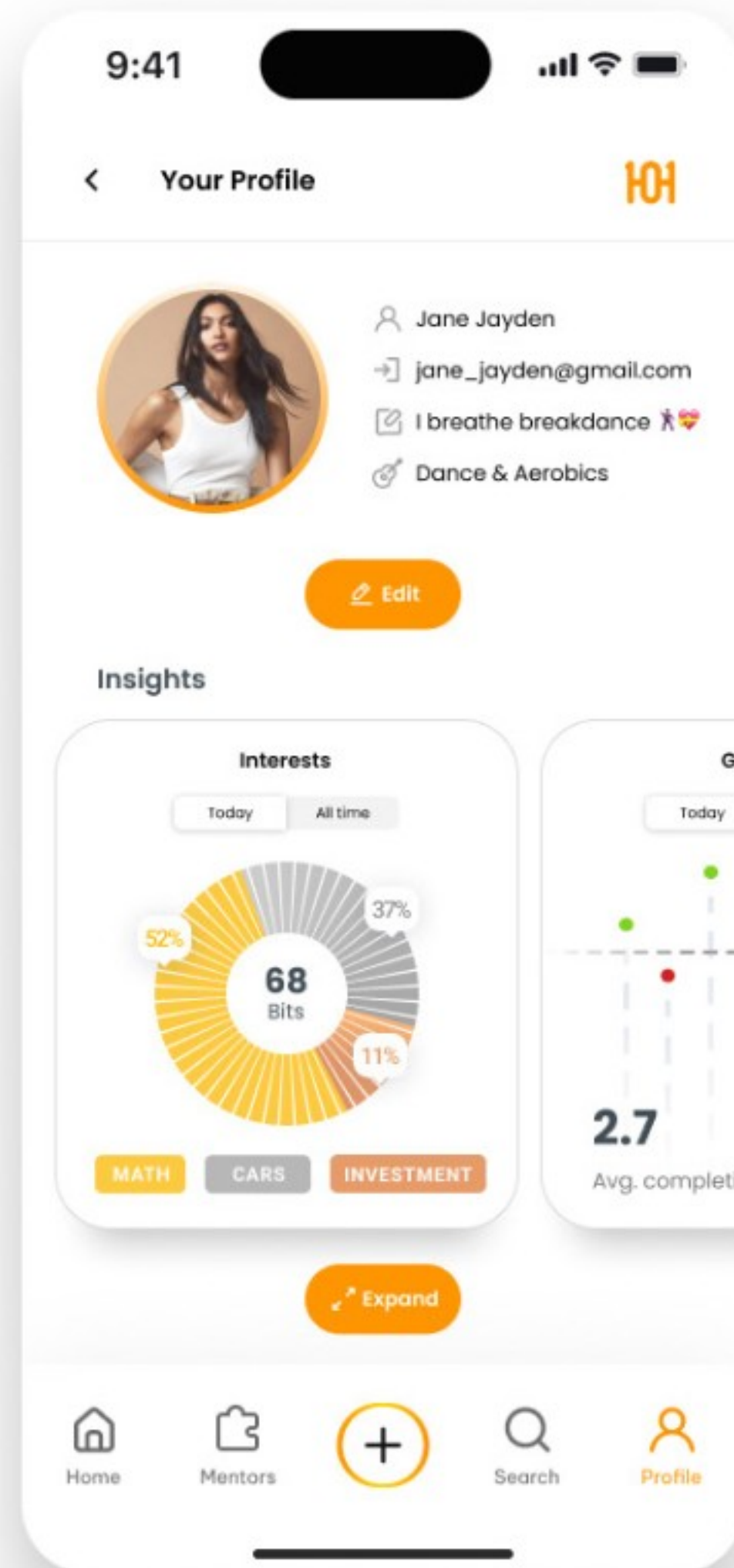
Feed

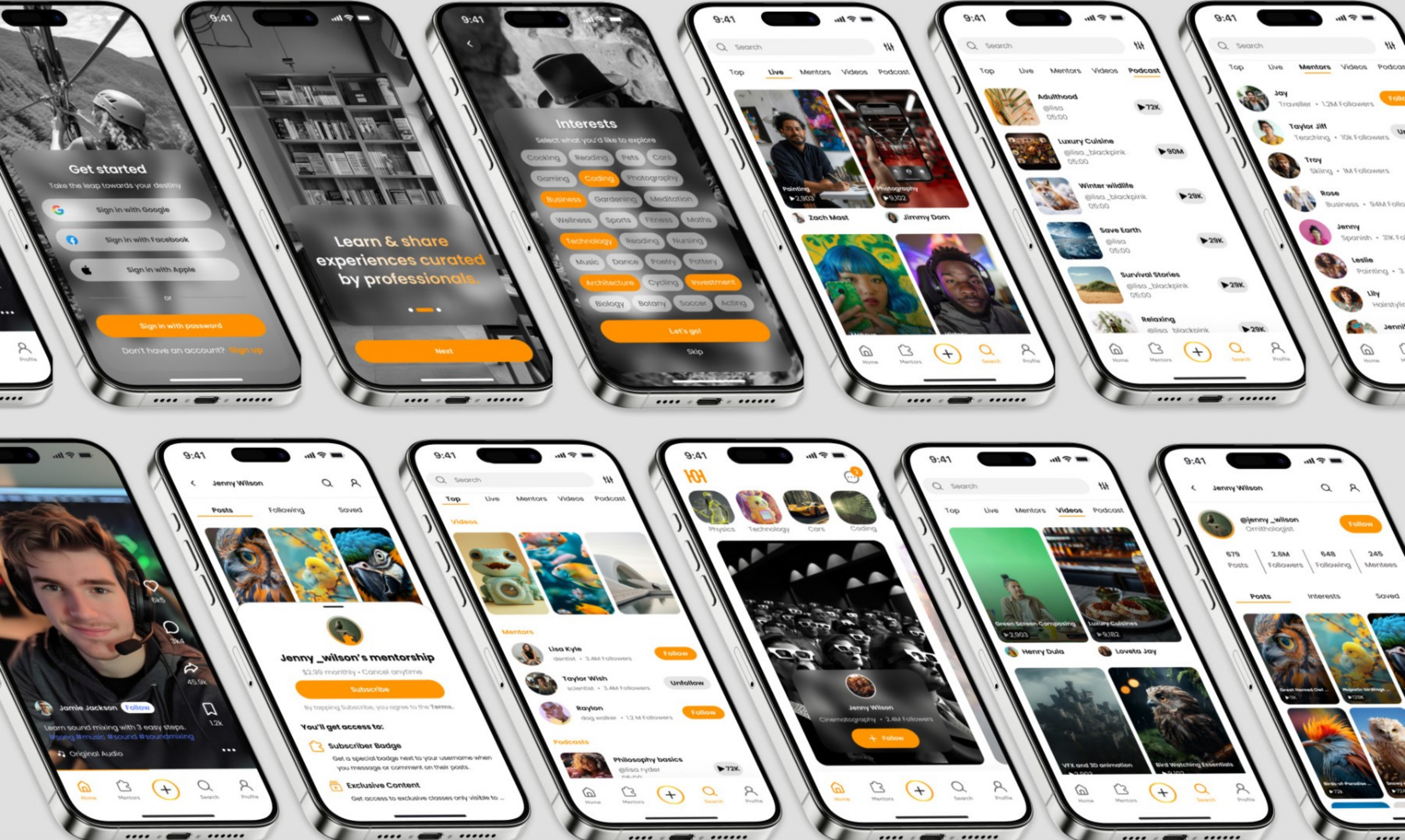


Explore



Profile







101



Disc over

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.bizzbuzz.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 empower 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://www.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

Spacial audio feature in Apple music makes 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://www.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



[Demandsage](#)



Total Visits

Nov 2024 Worldwide

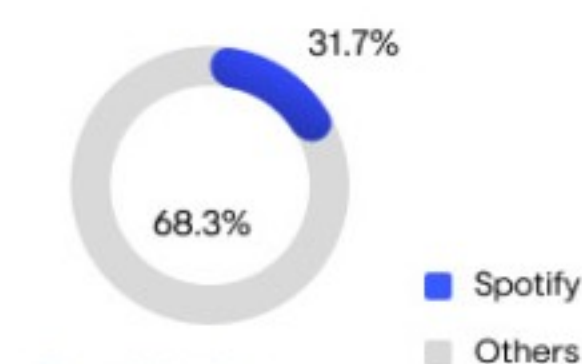
640
Million

[Statista](#)



Market Share

Nov 2024 Worldwide

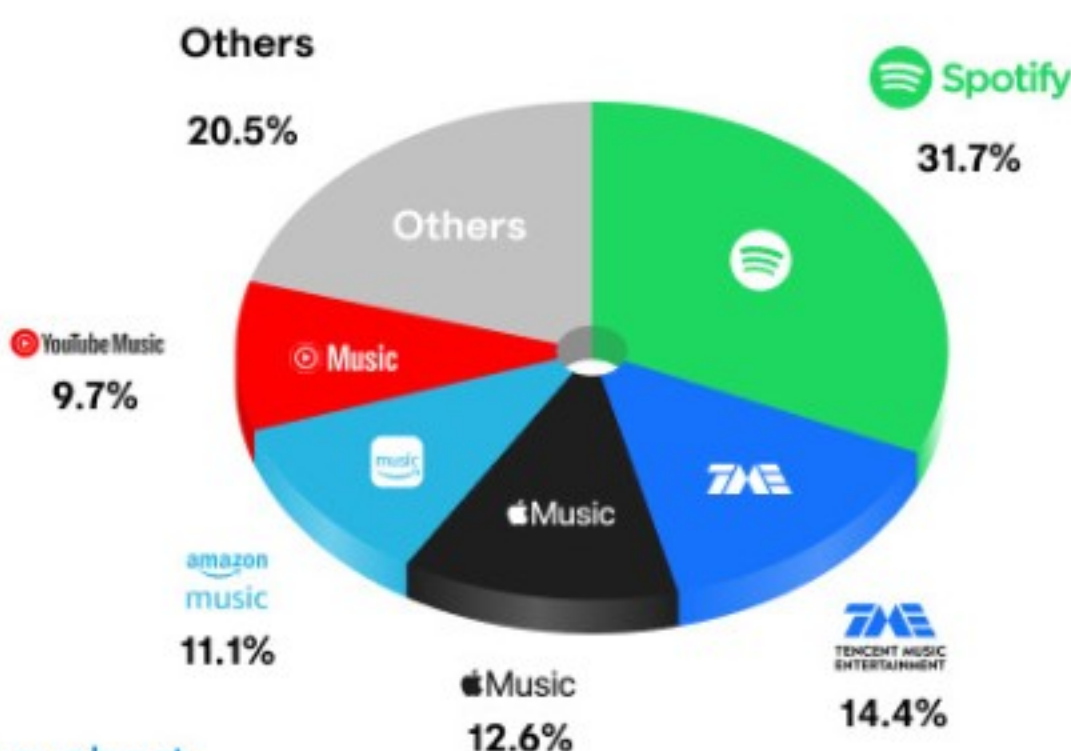


[Backlinko](#)



Cross-Browsing

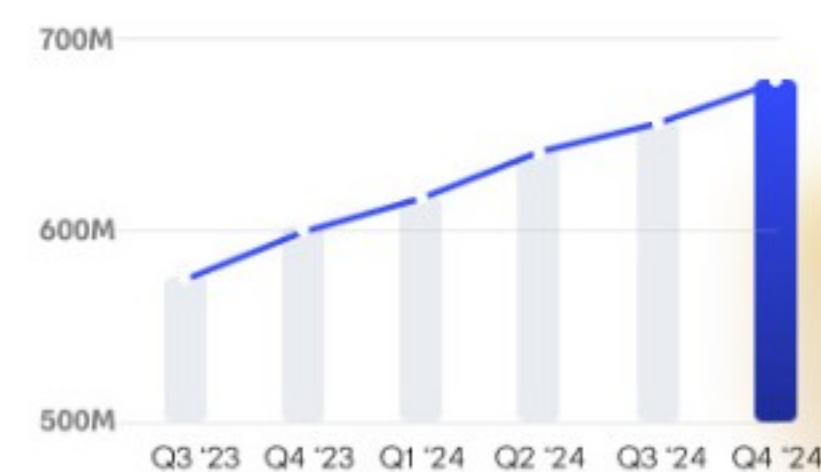
Oct 2024 Worldwide



[Anychart](#)

Downloads

Q3 2023 - Q4 2024 Worldwide



675
Million

[Spotify](#)



Paid user revenue

Dec 2024 United States



[Statistica](#)



Competitor Analysis

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



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.



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.



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.



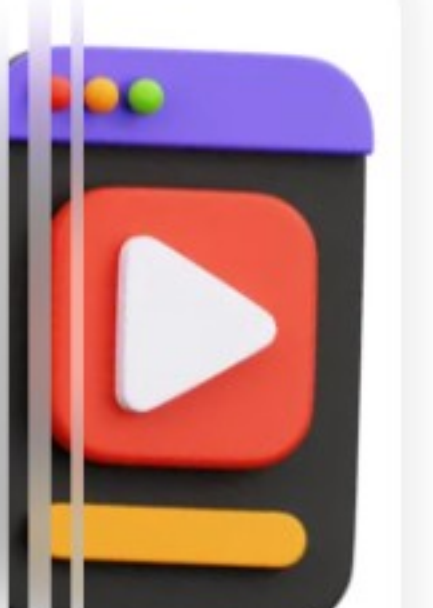
Jam Sessions

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



About

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

Skills

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

User Persona

Robert Jones

Robert is a jolly 21 year old school student/ lacrosse player whose life revolves around study, friends and fitness. His friends and him are all athletes and their motivation depends on the mood of their music, whether it is a study night, workout sesh, party time. Their tracks need their tromping base but they occasionally prefer small time artists and local bands.

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.

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.

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.

EXPERIENCES

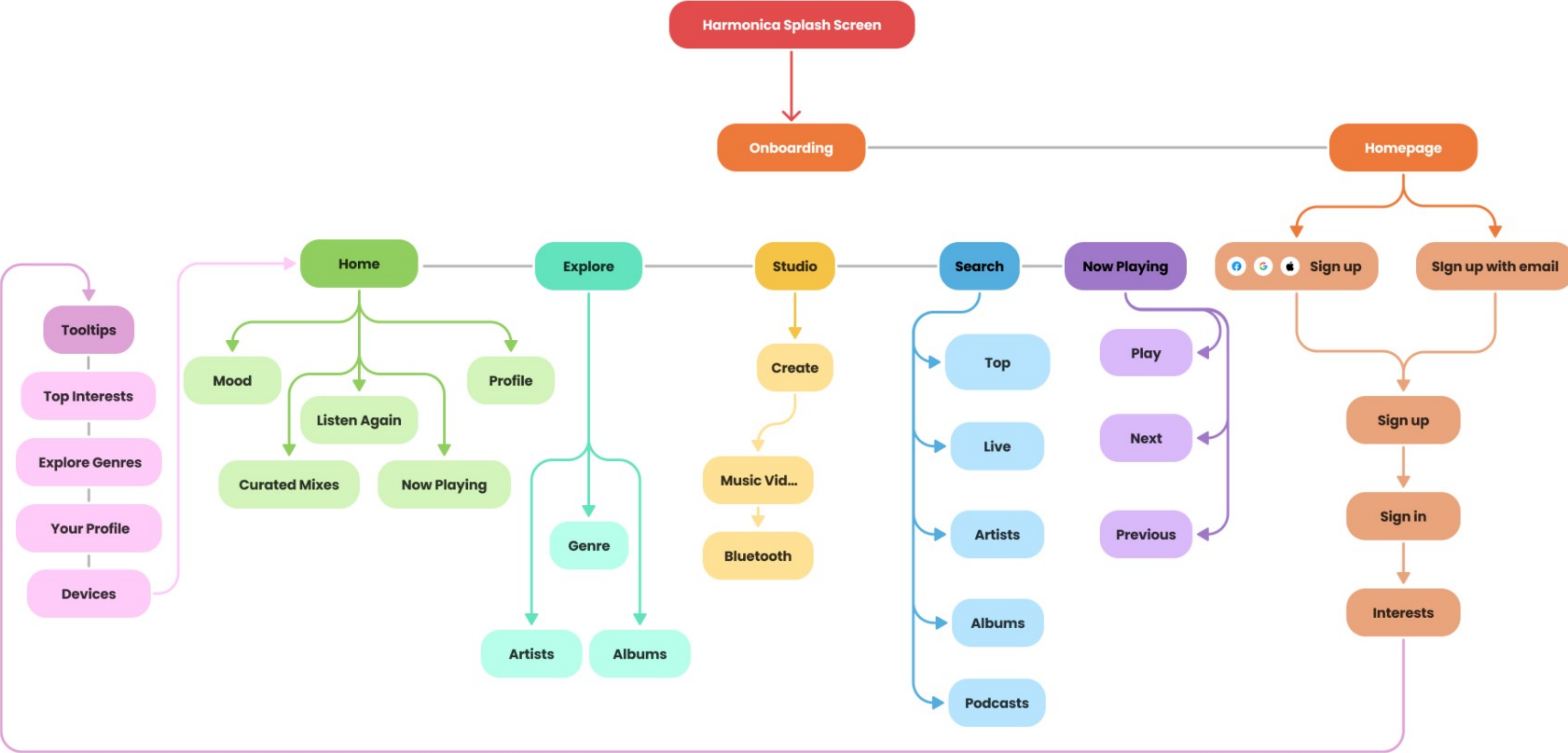
- 😞 Robert frequently uses streaming platforms but often feels overwhelmed by the abundance of choices.
- 😞 He values discovering lesser-known artists to create a sense of individuality and support local talent.

Moodboard



Deliver

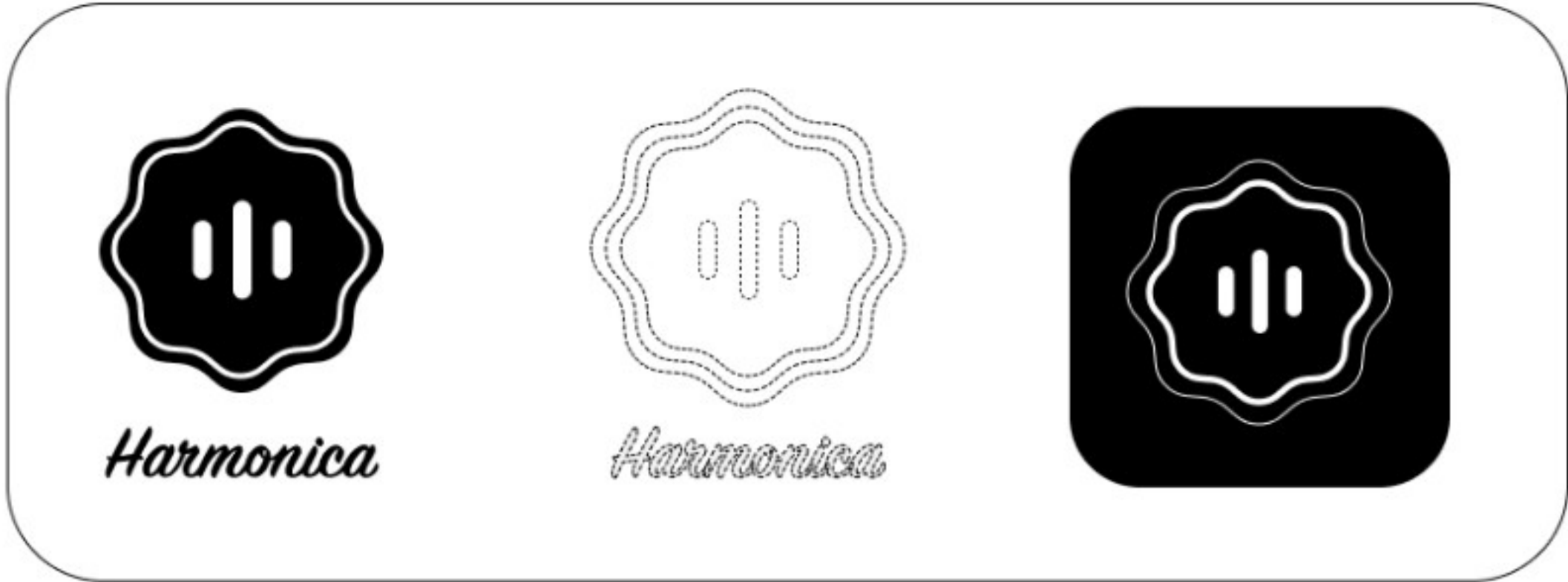
Information Architecture



Low-Fidelity Prototype



Branding



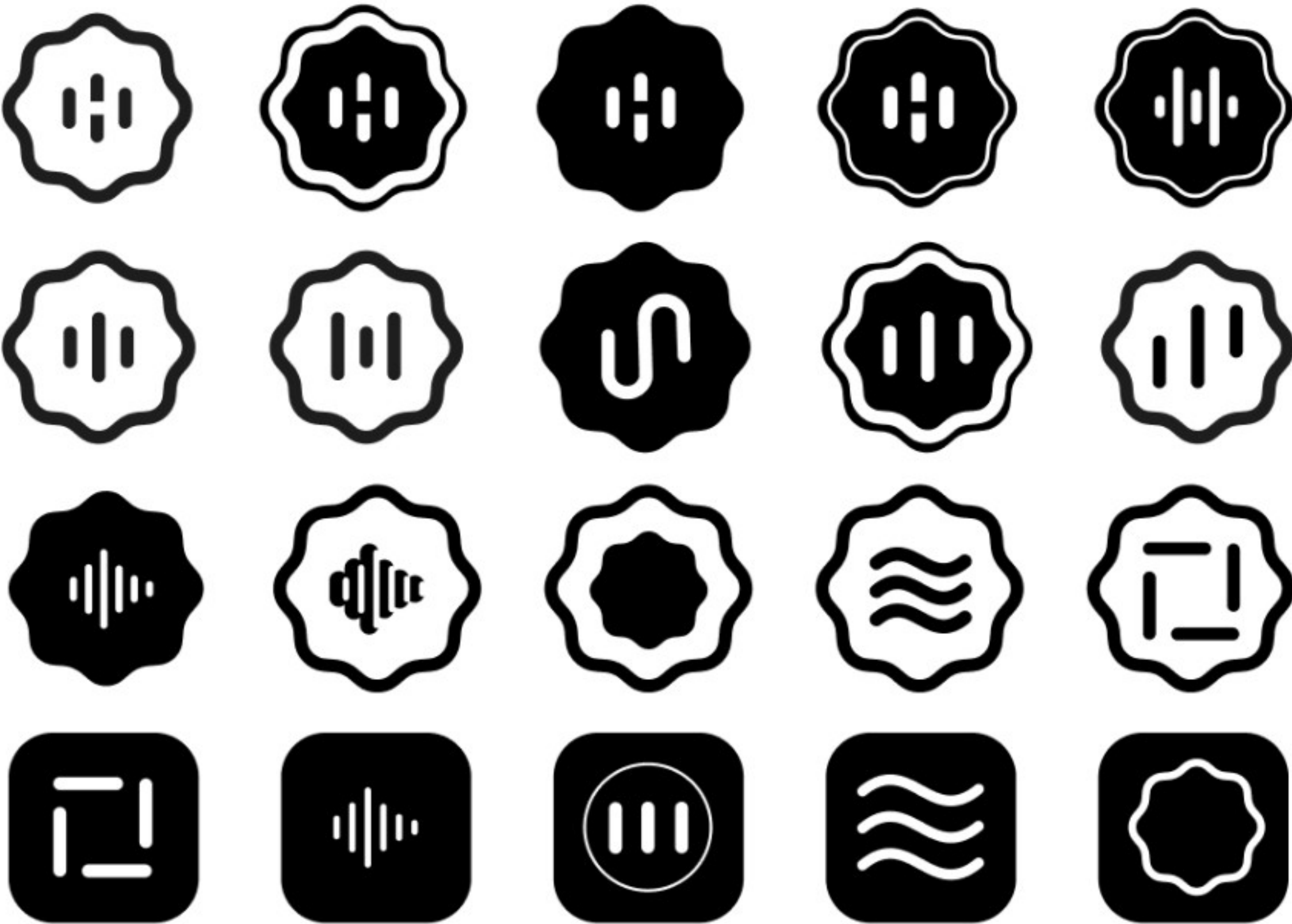
Balance • Musical • Harmonic

har·mon·i·ca

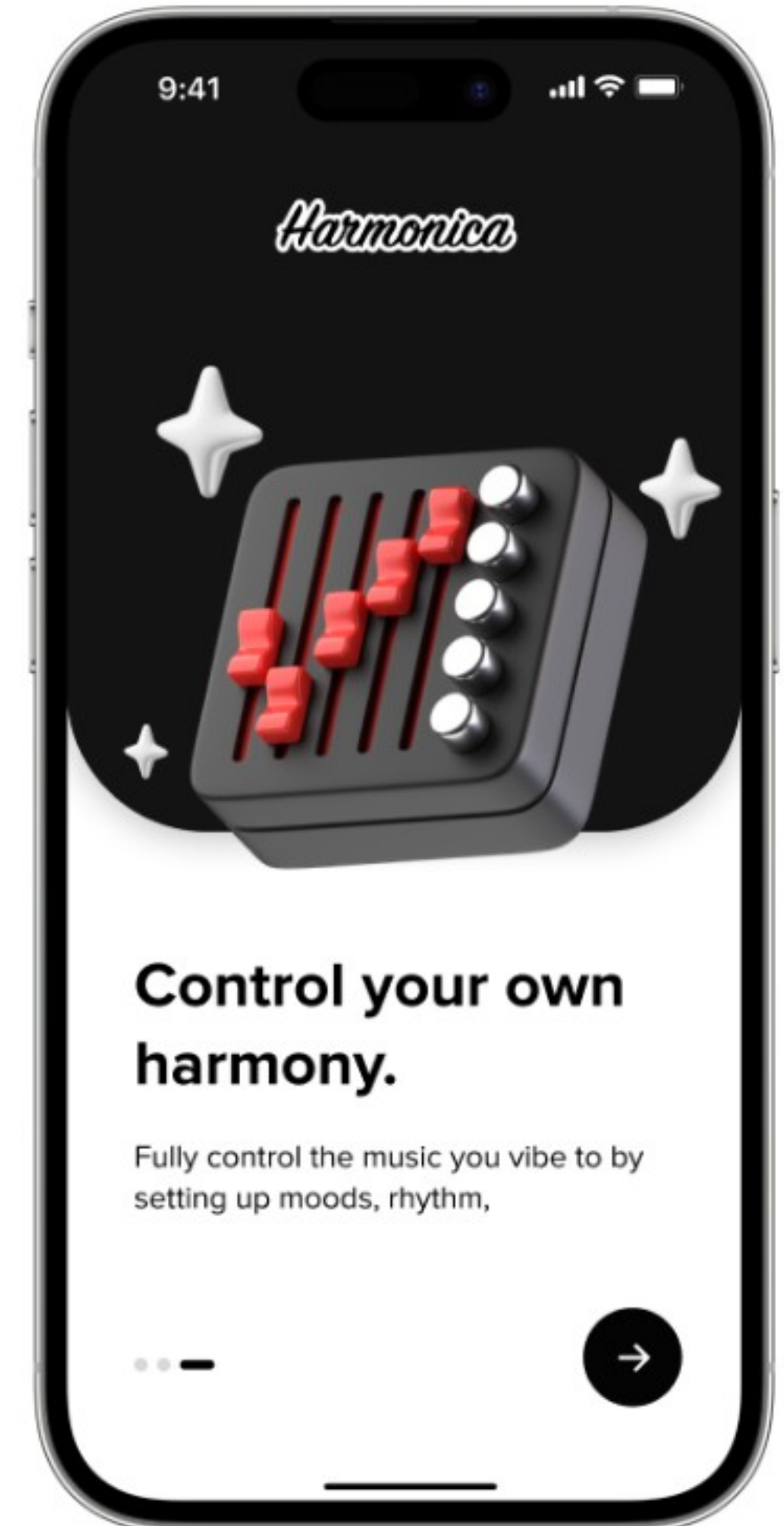
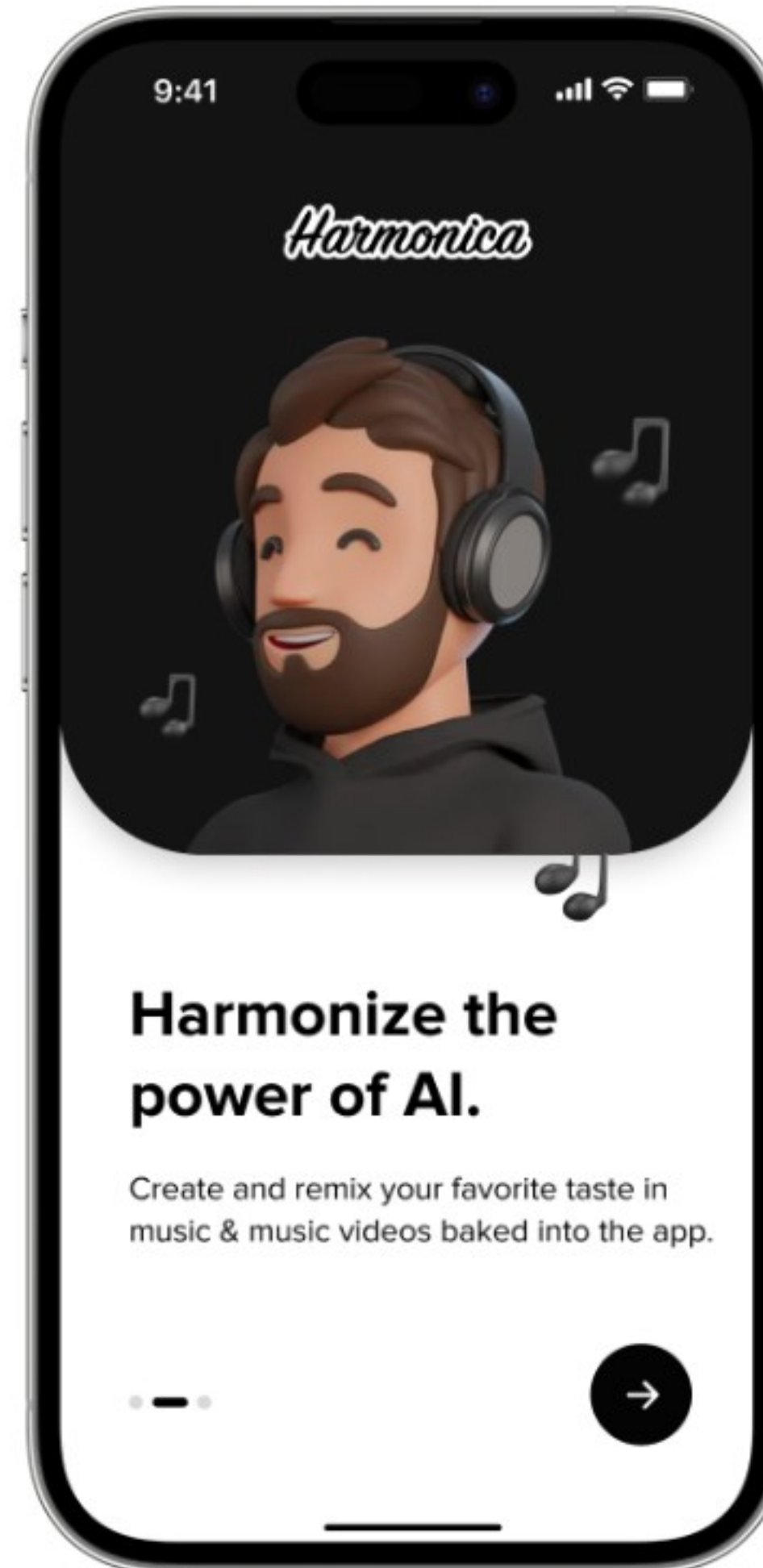
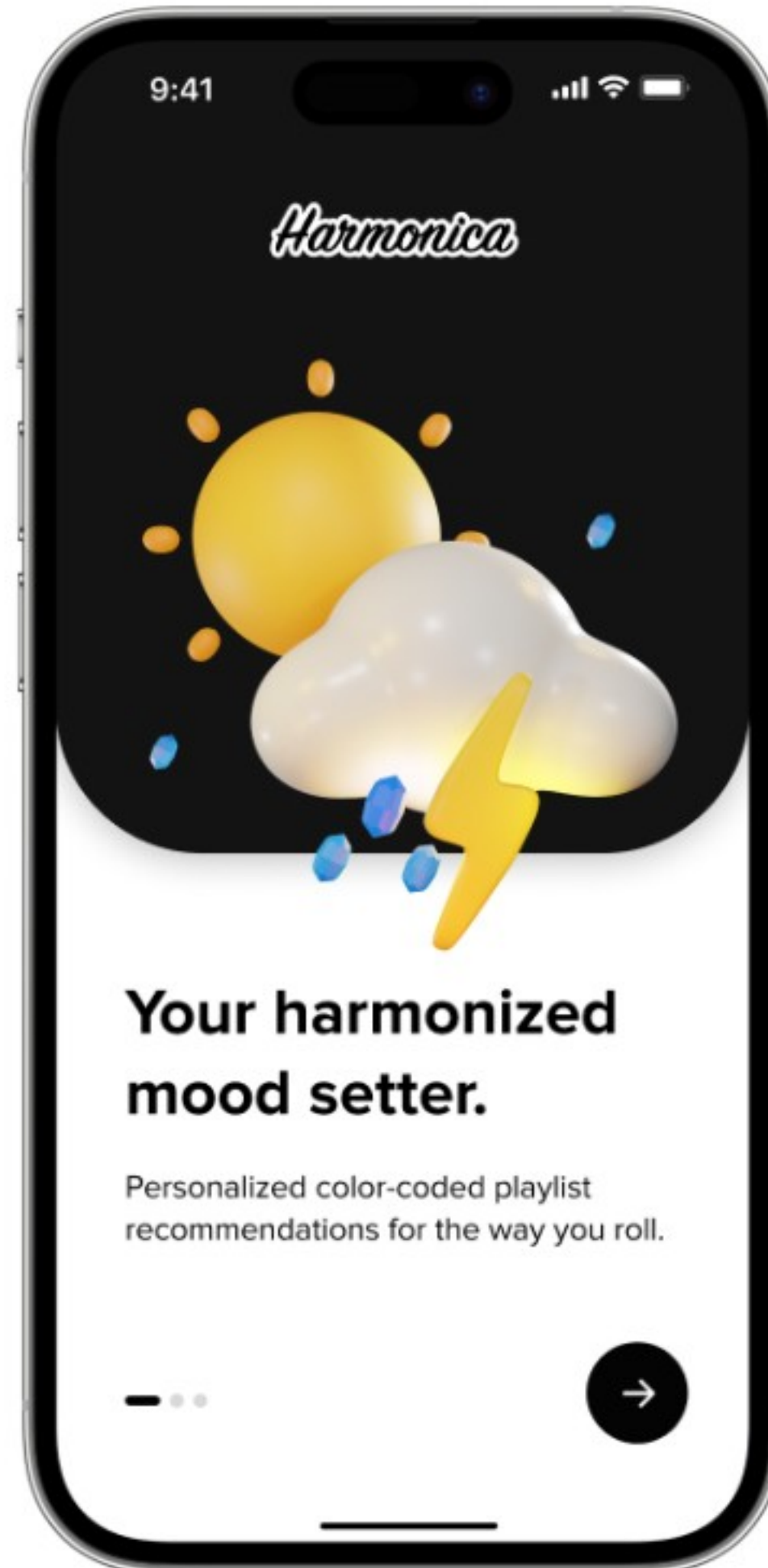
a small rectangular wind instrument with a row of metal reeds along its length, held against the lips and moved from side to side to produce different notes by blowing or sucking.

Your Harmonized Mood Setter

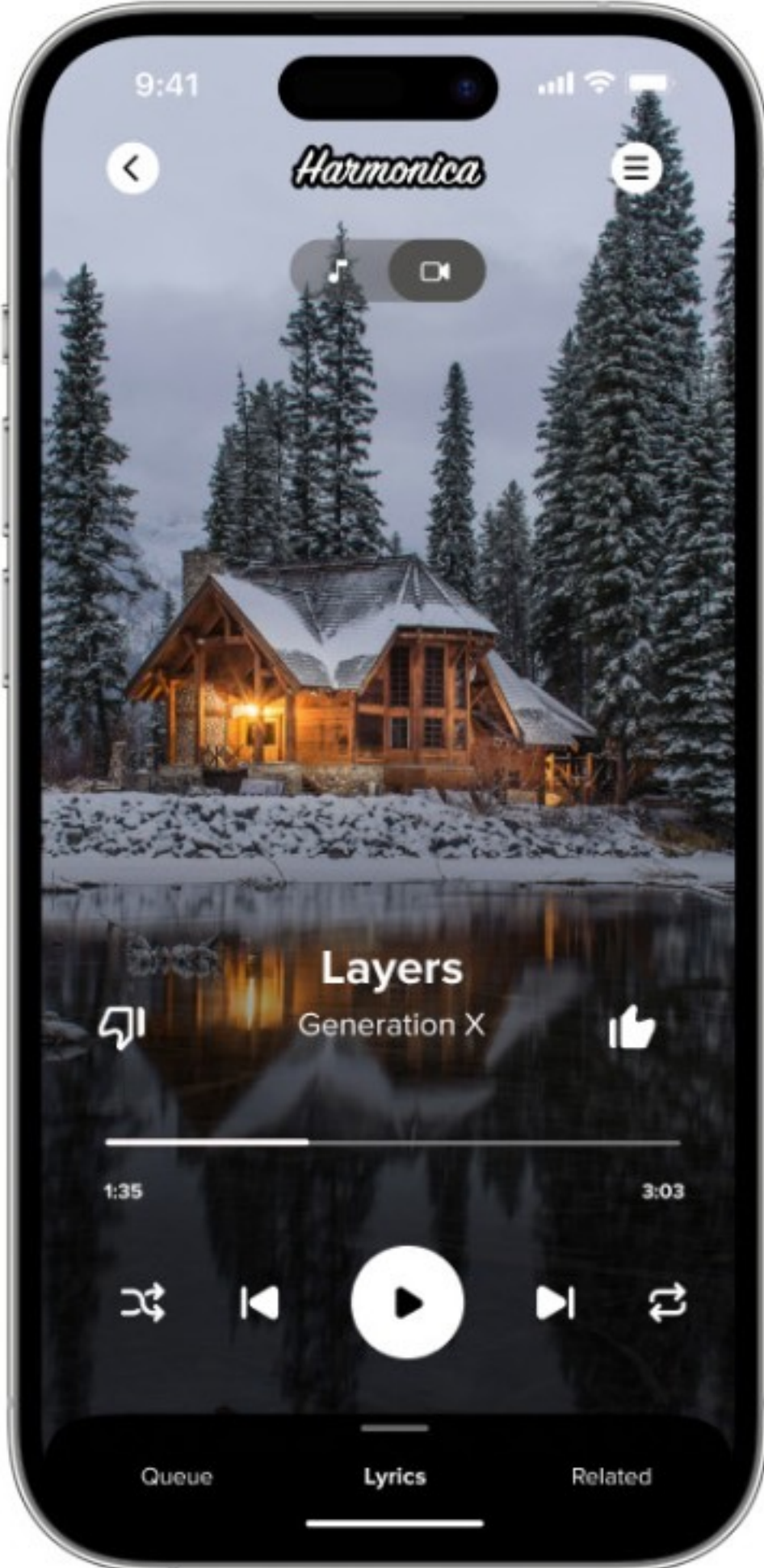
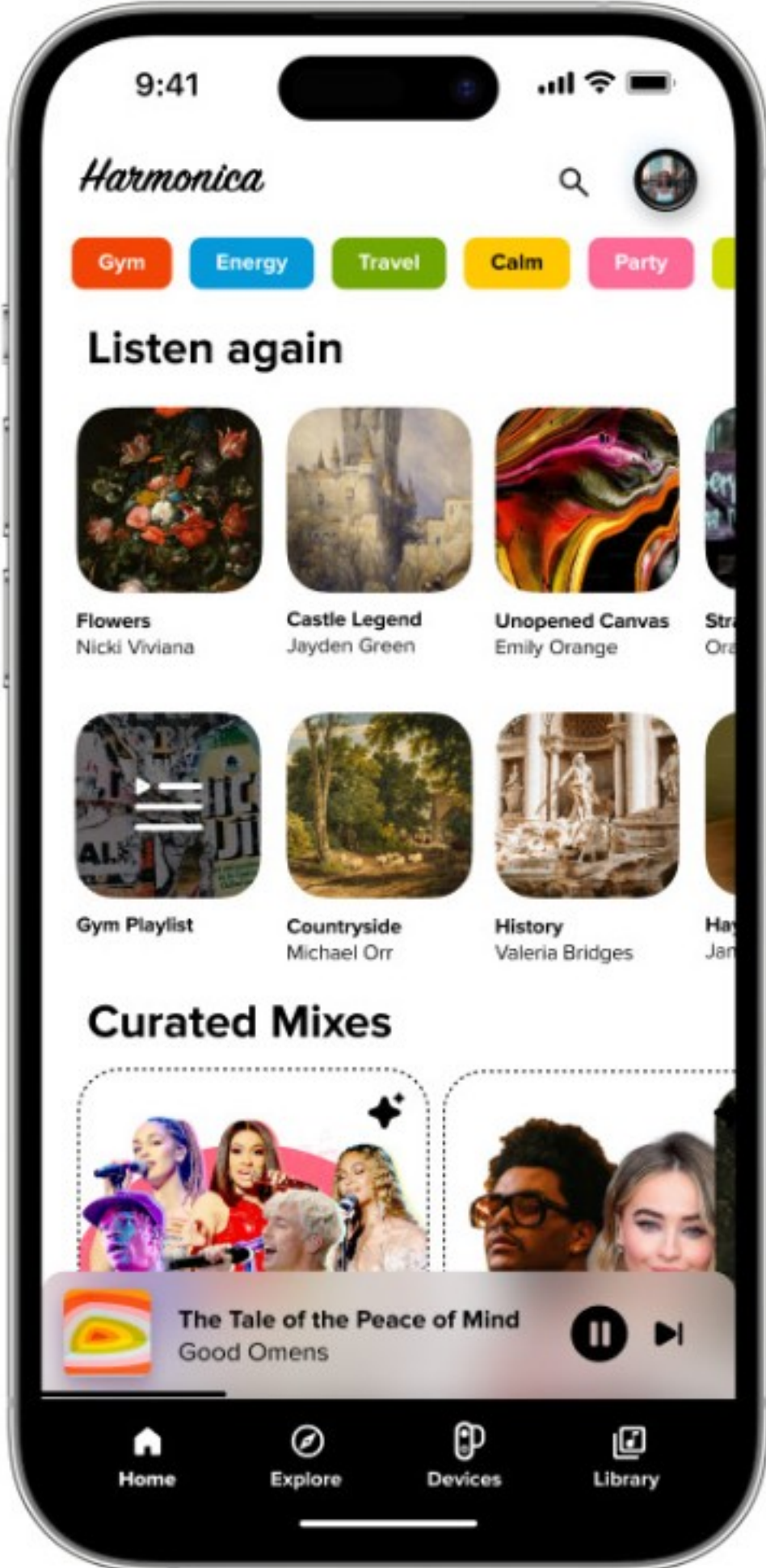
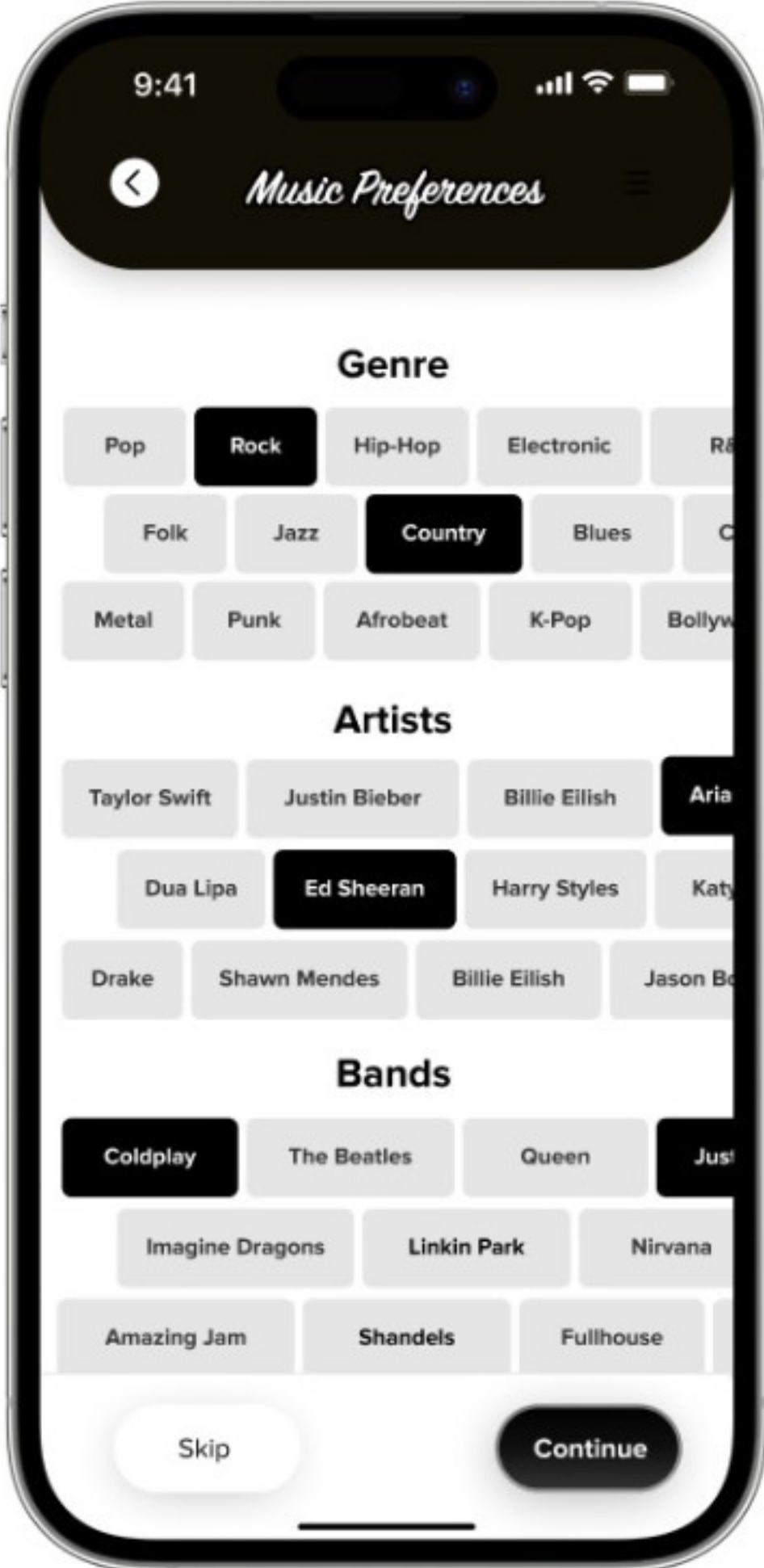
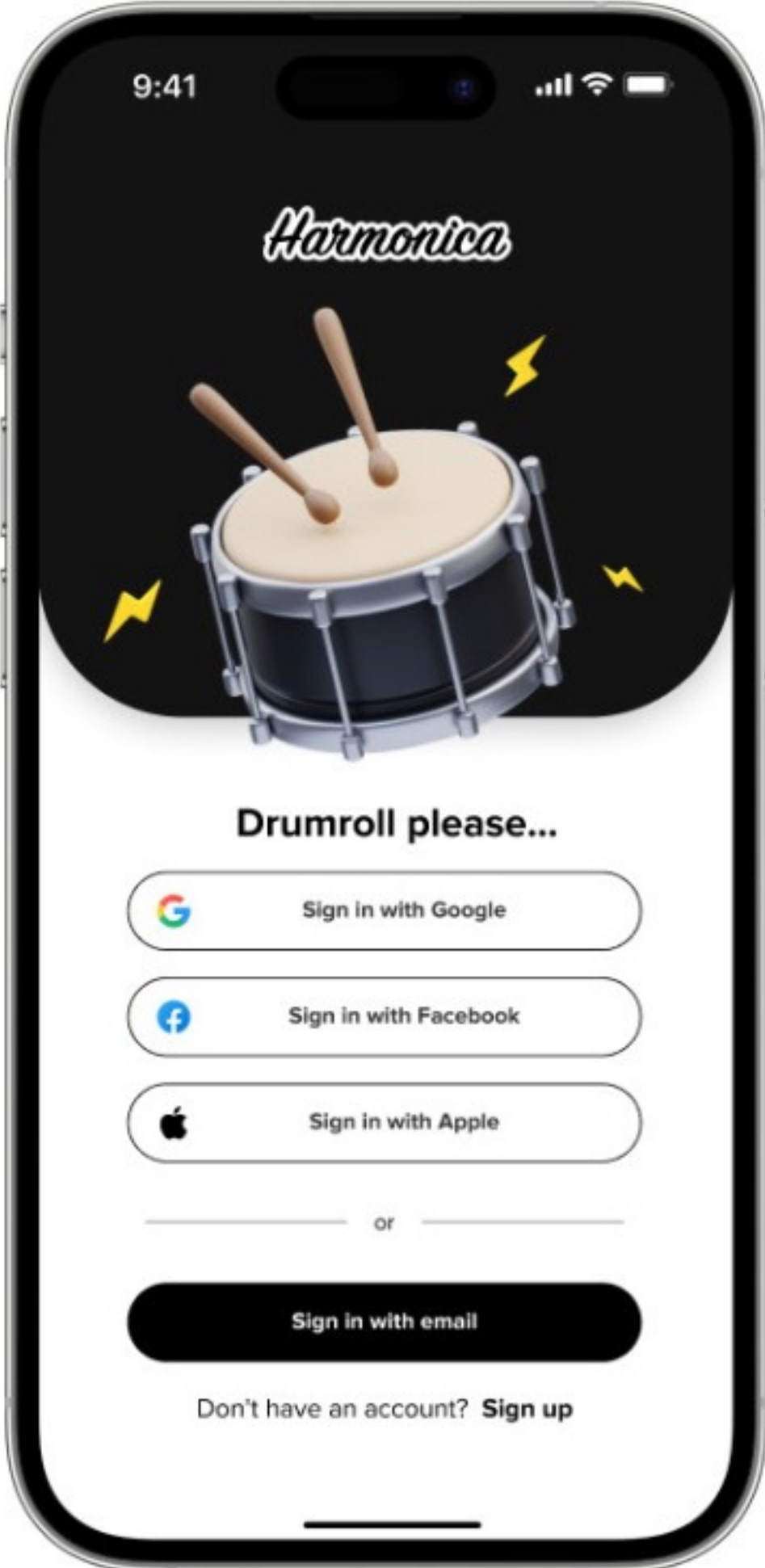
Harmonica *Harmonica* *Harmonica* *Harmonica* *Harmonica*
 Harmonica Harmonica Harmonica Harmonica Harmonica



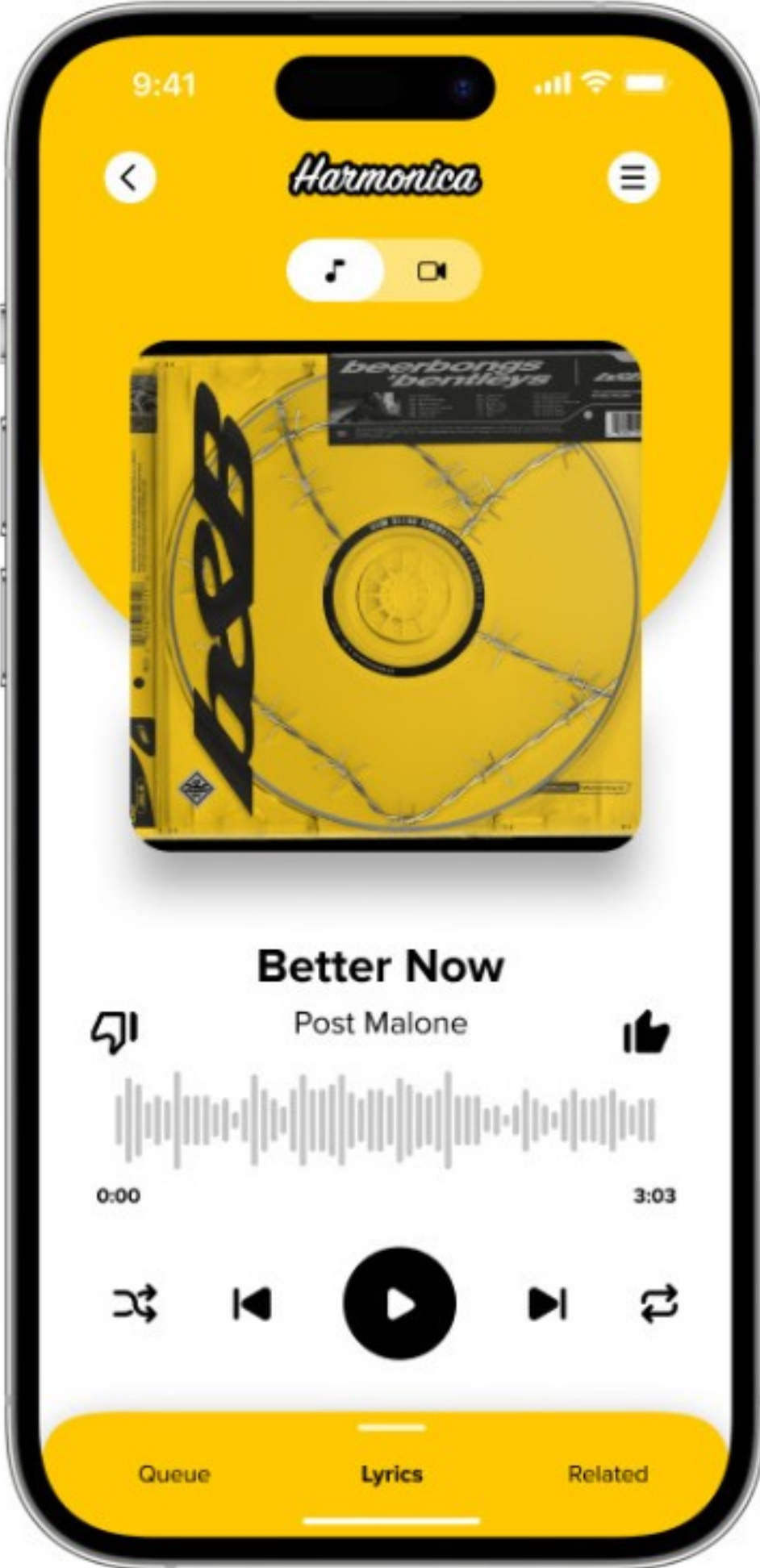
Onboarding



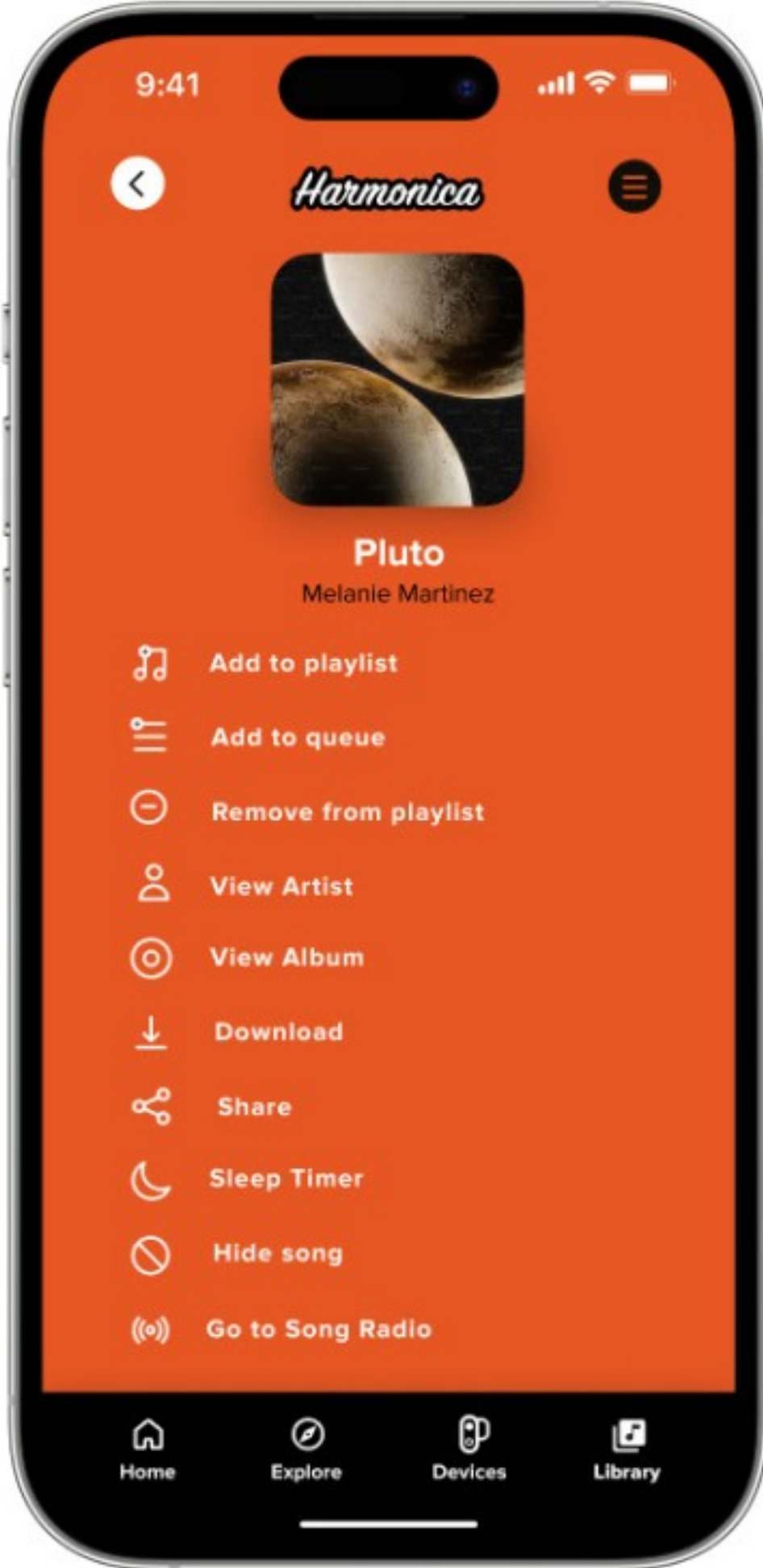
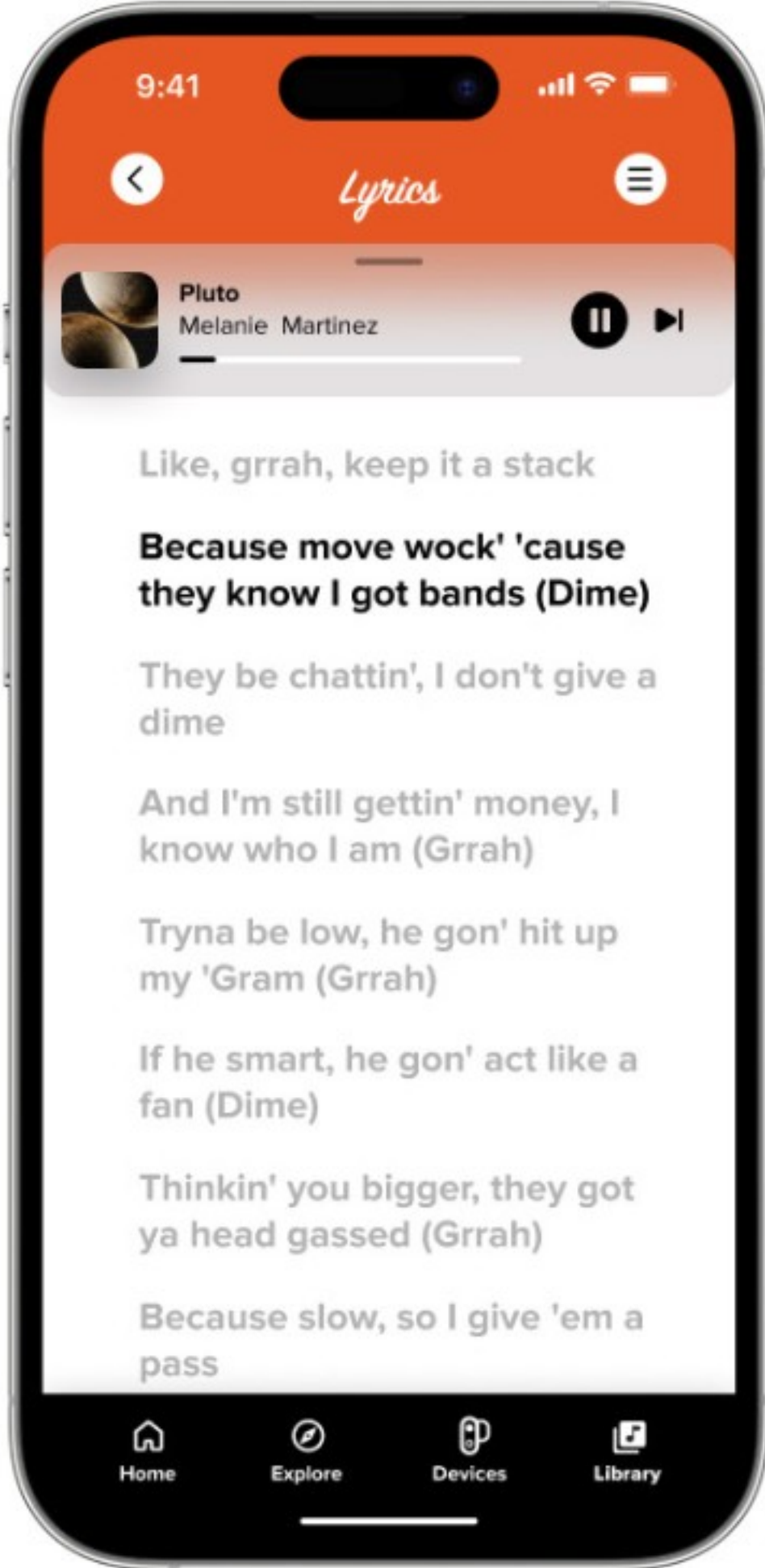
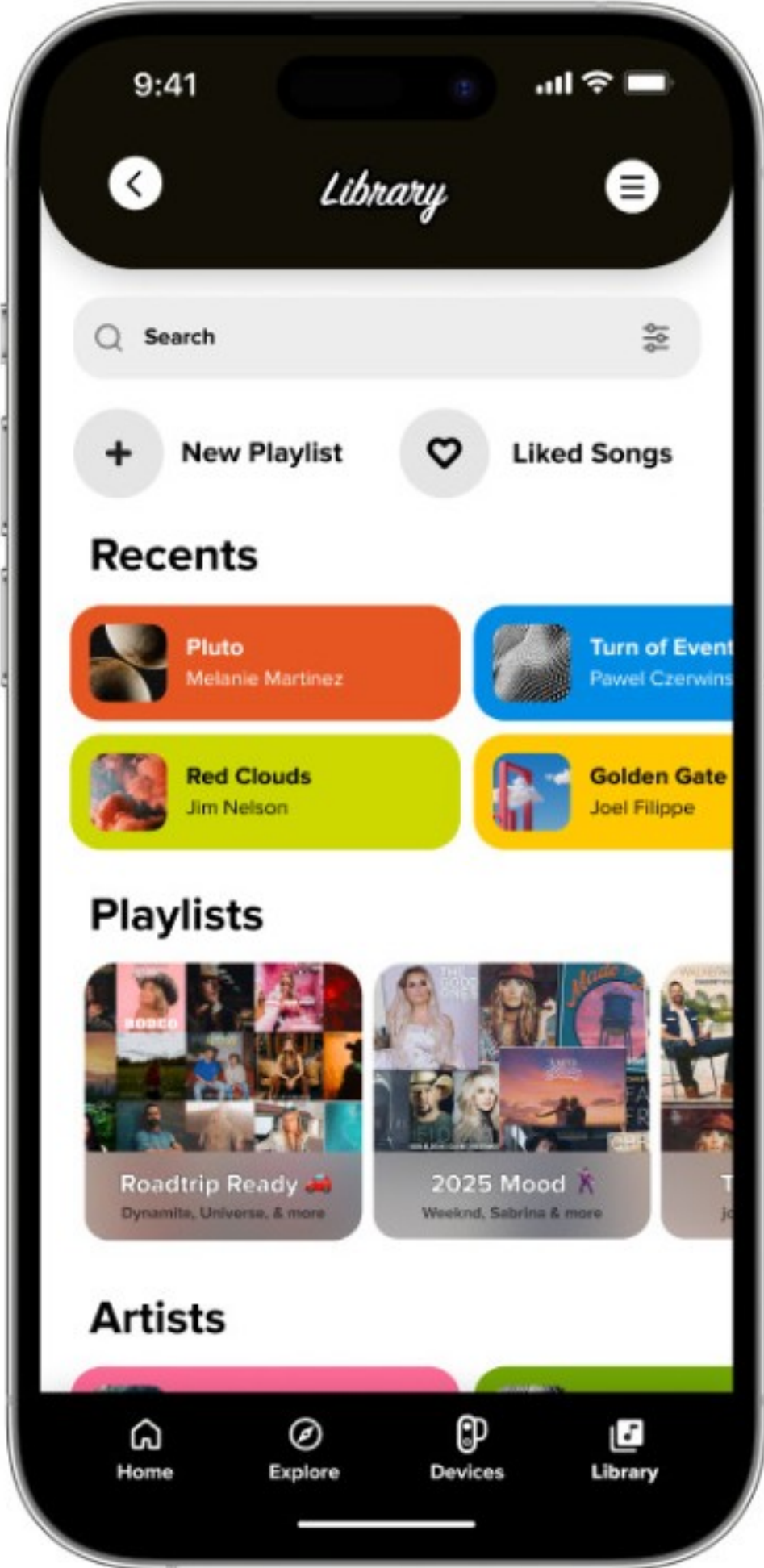
Preferences



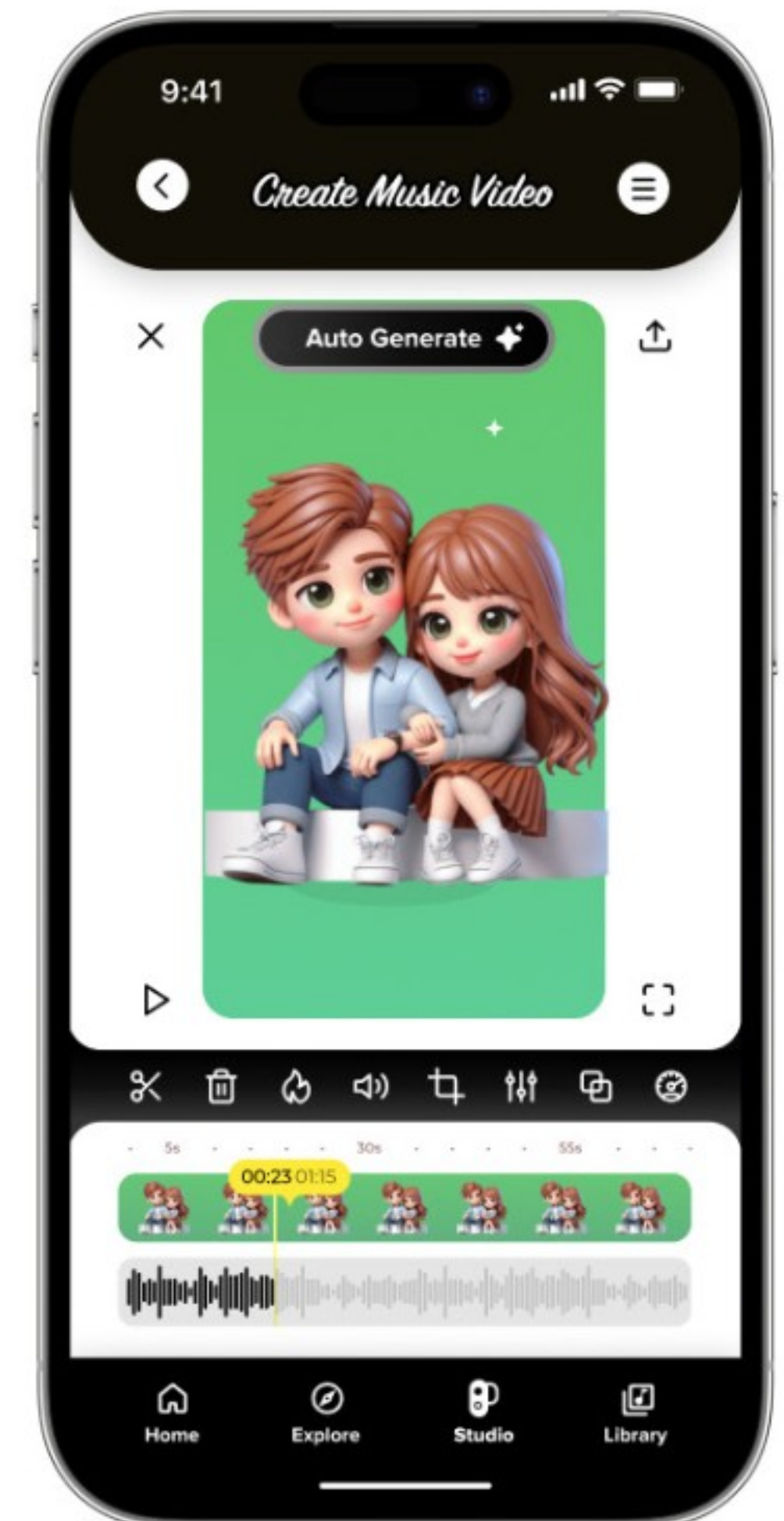
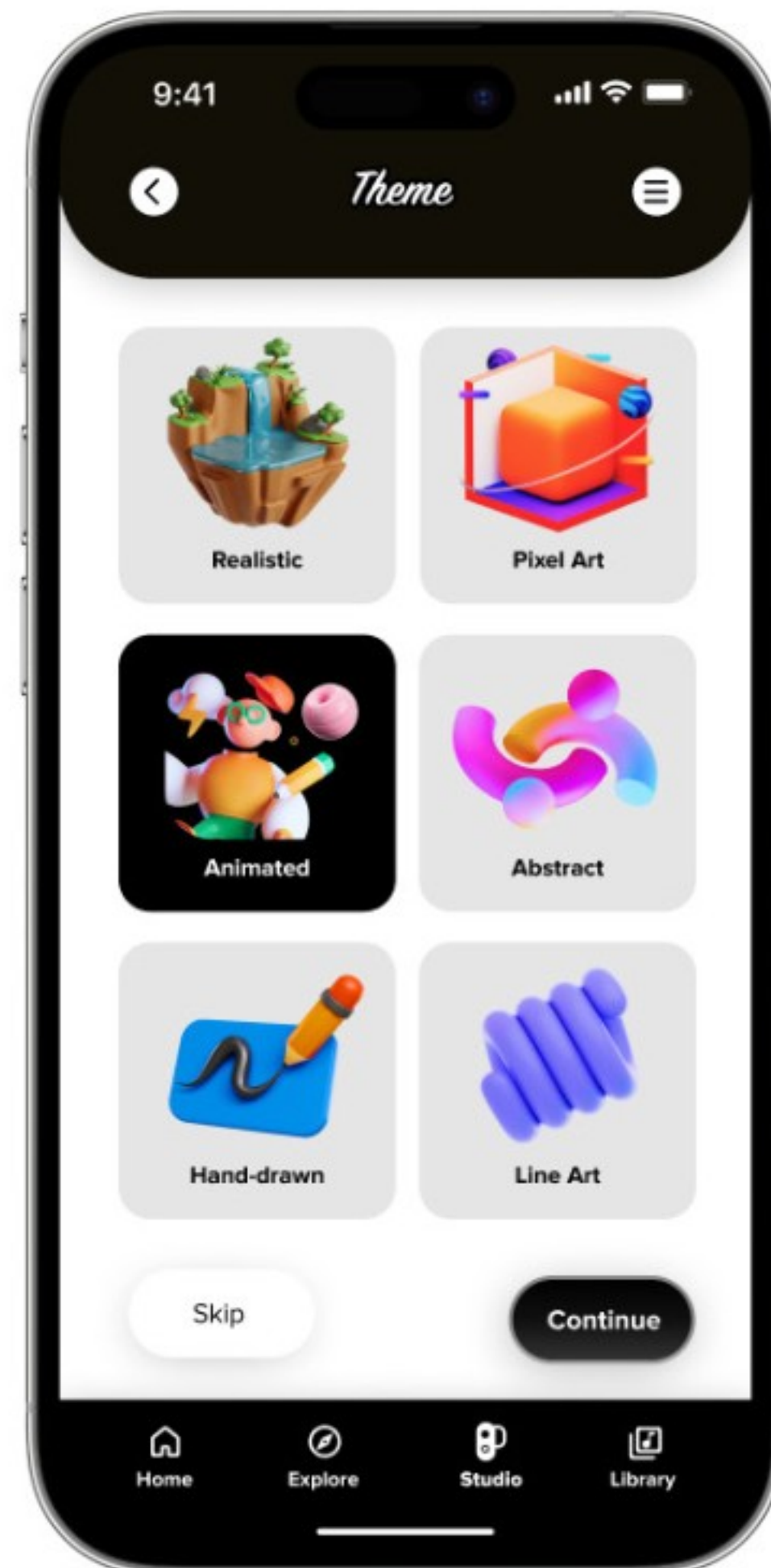
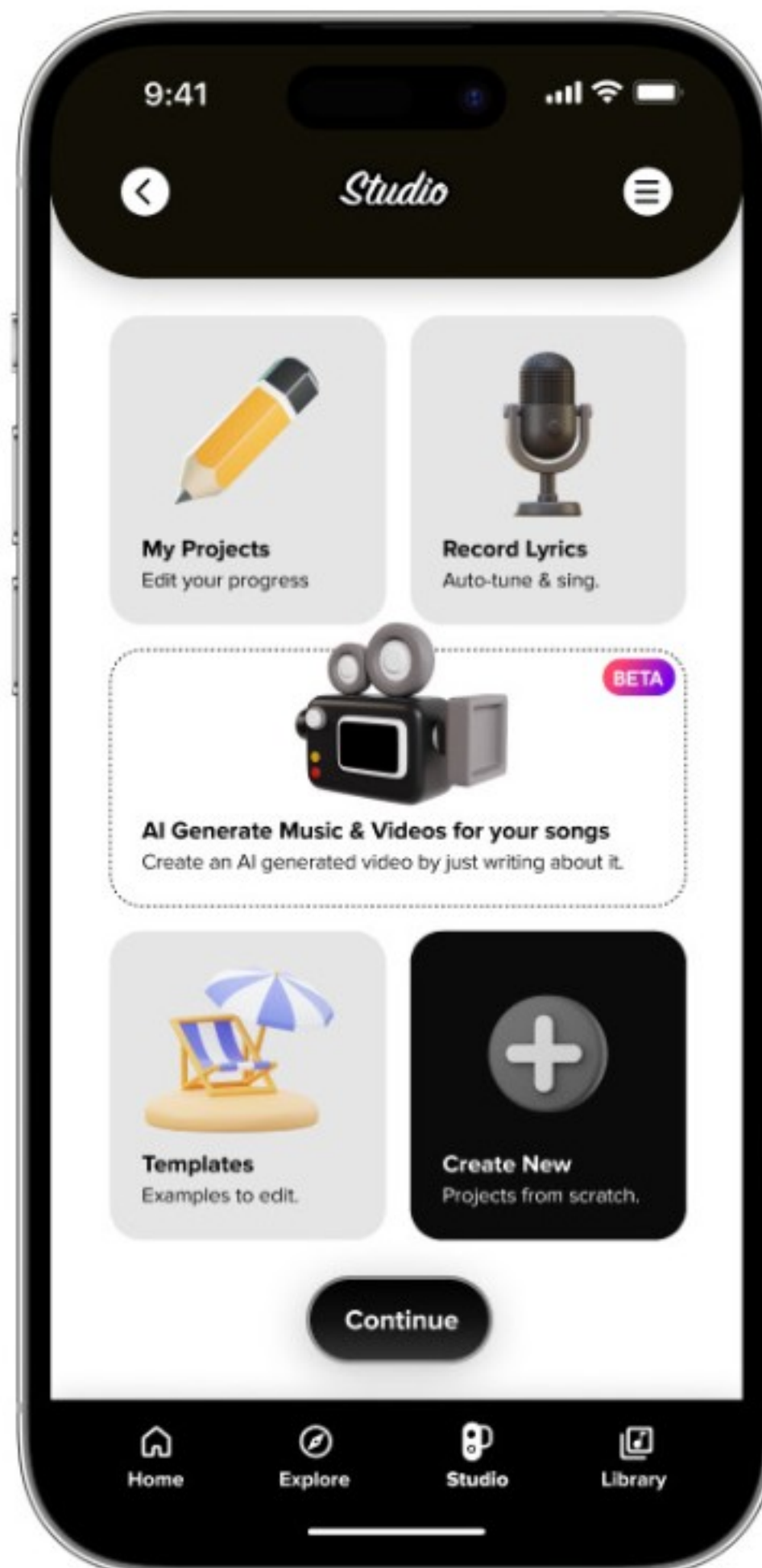
Now Playing



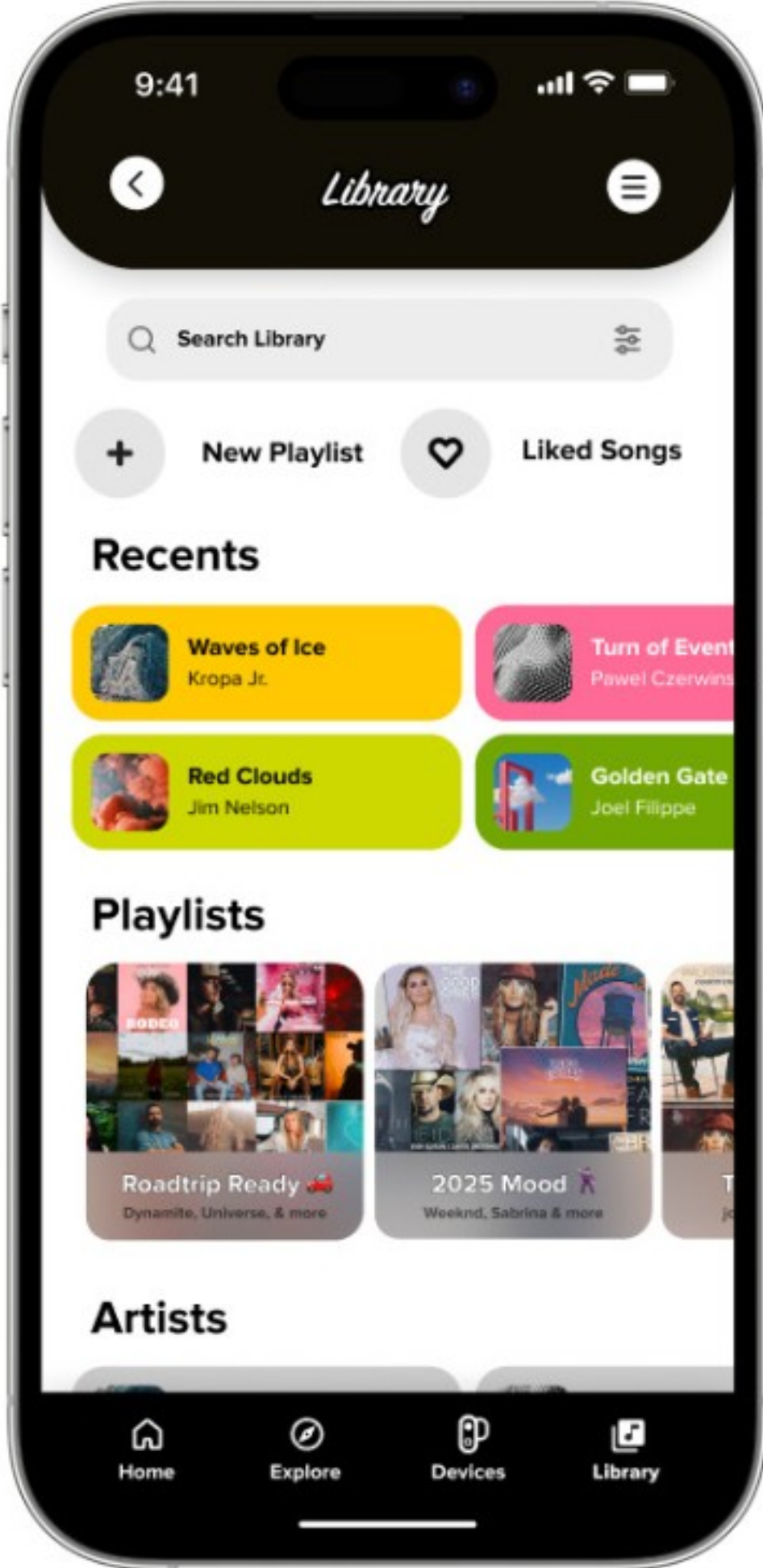
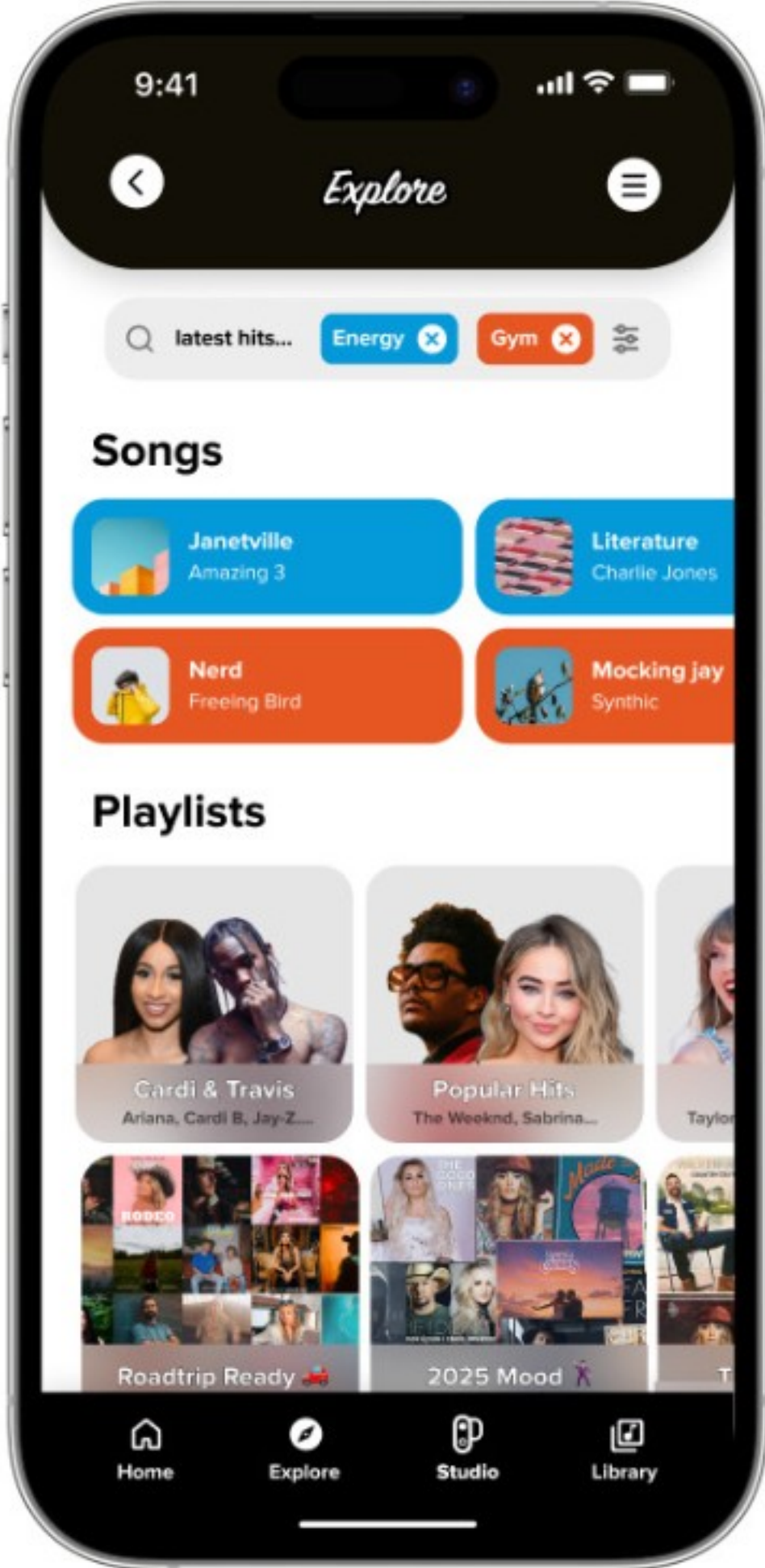
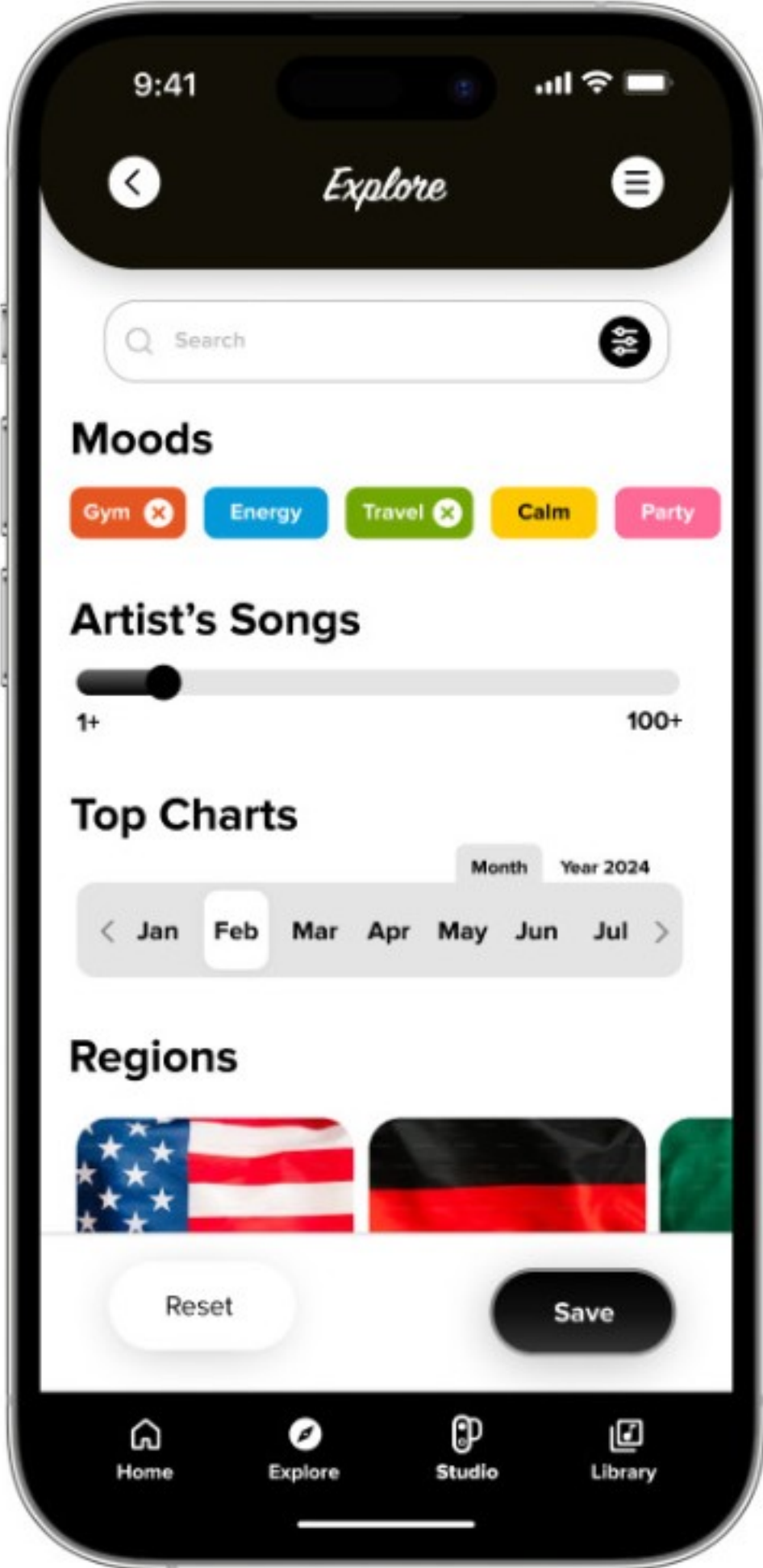
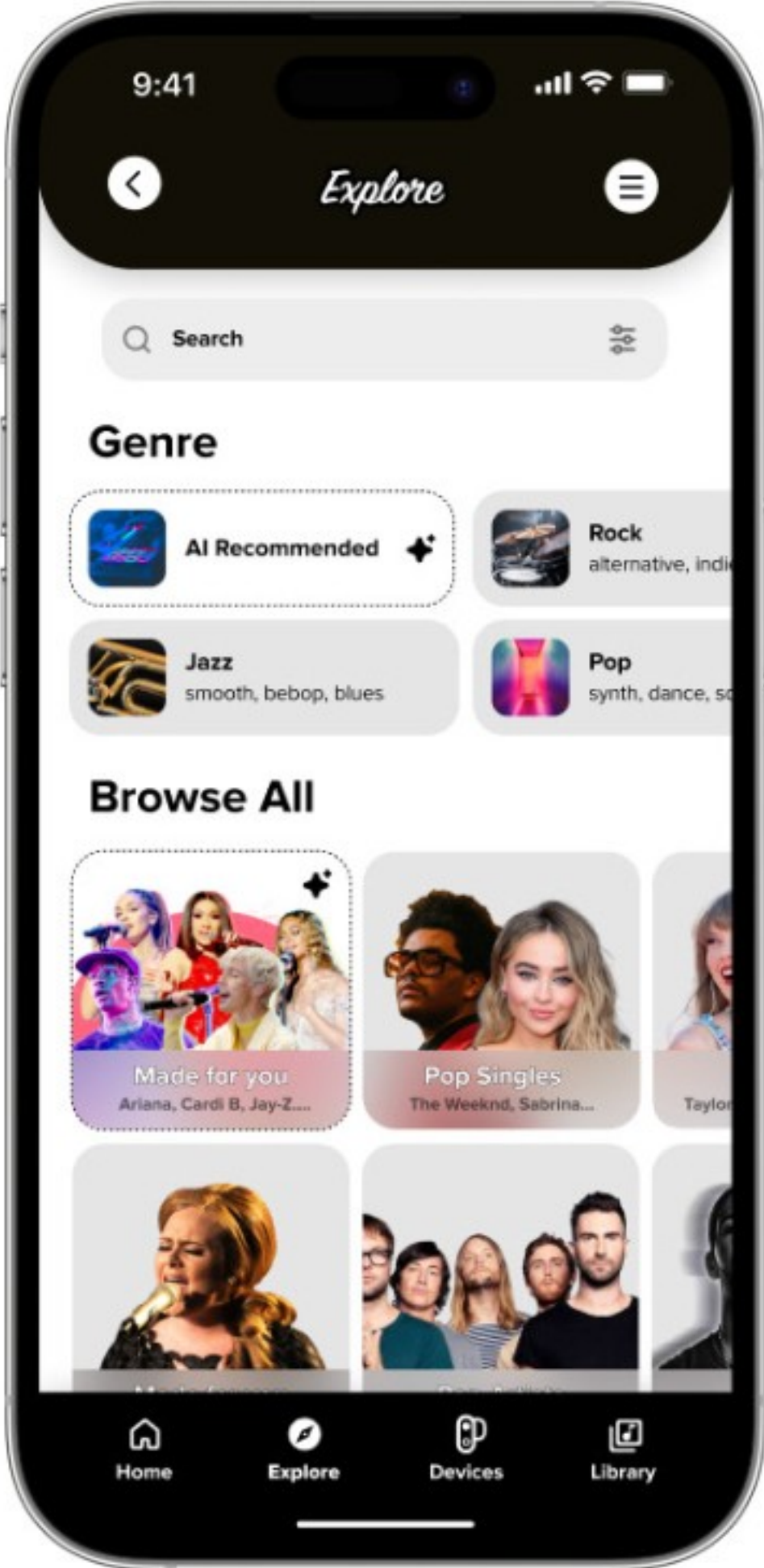
Search

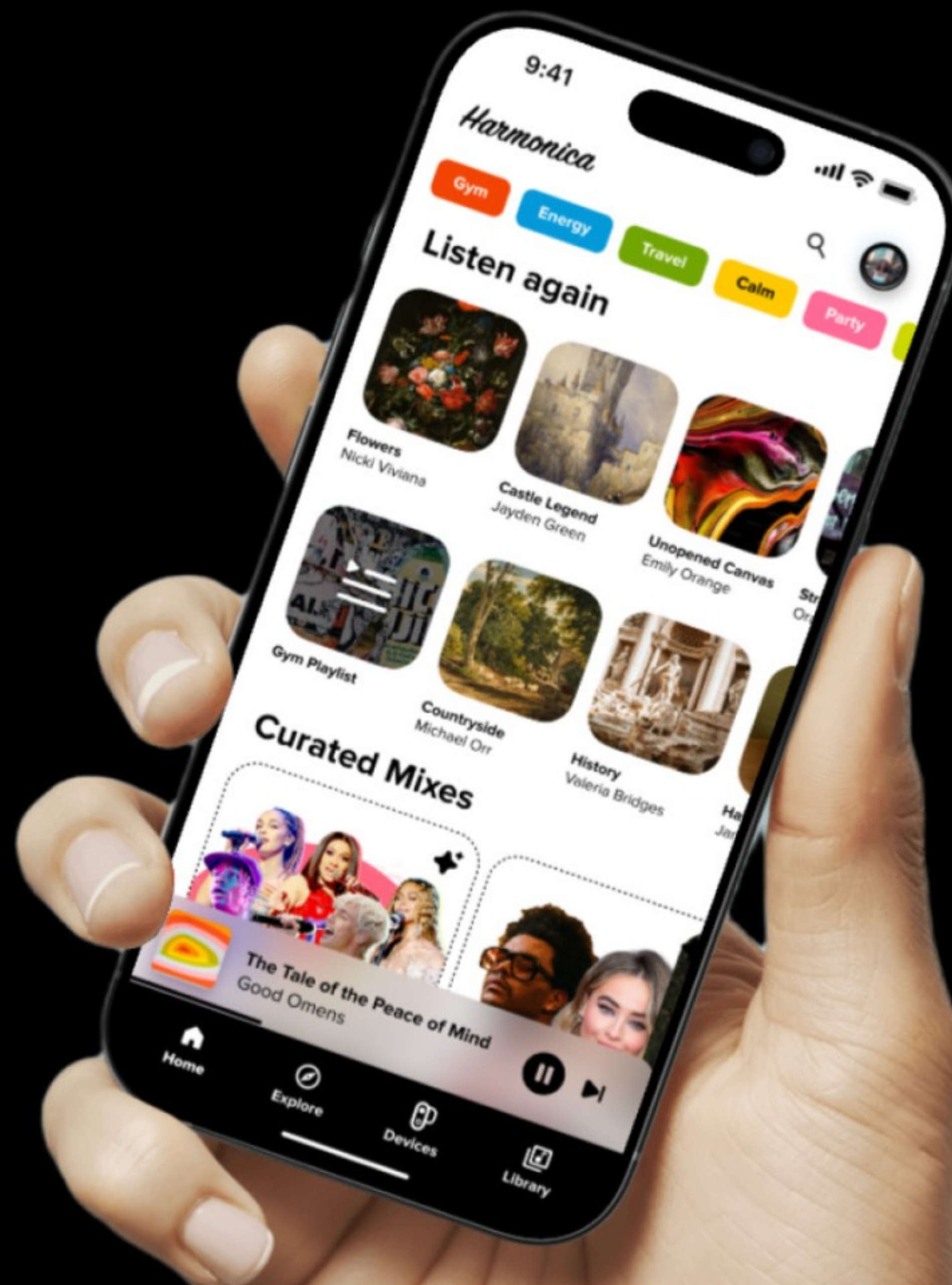


Studio



Explore







NHR

Disc over

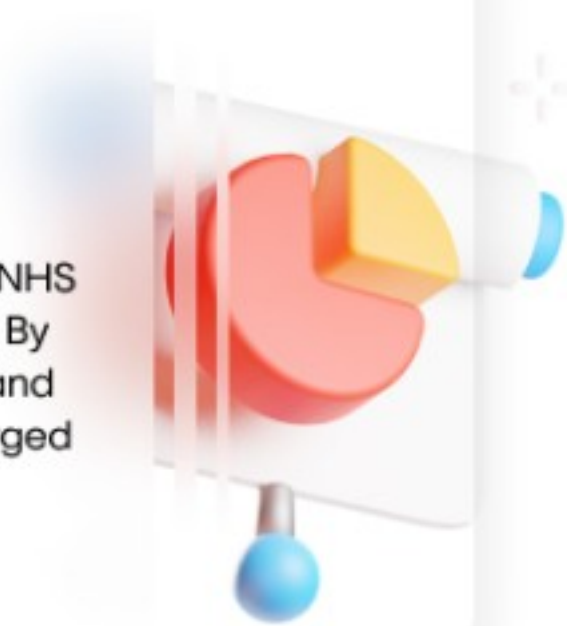
United Kingdom – NHS App

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://www.biomedcentral.com/)

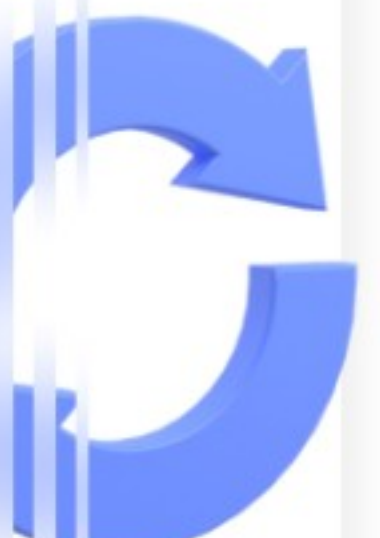


Updates

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

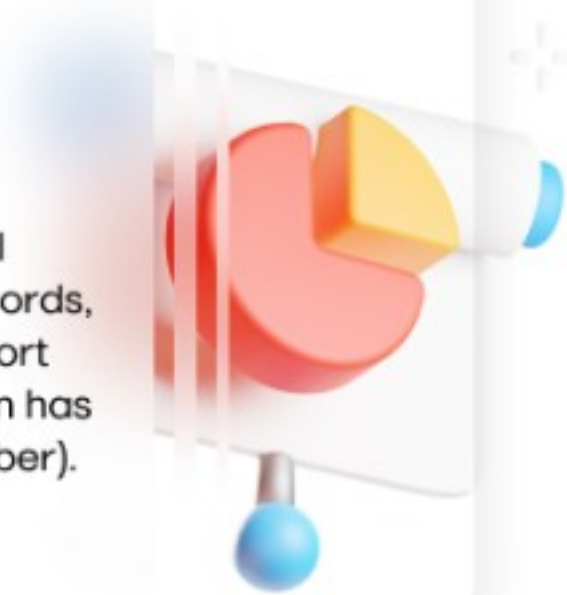


Canada – Provincial EHR/PHR Systems

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

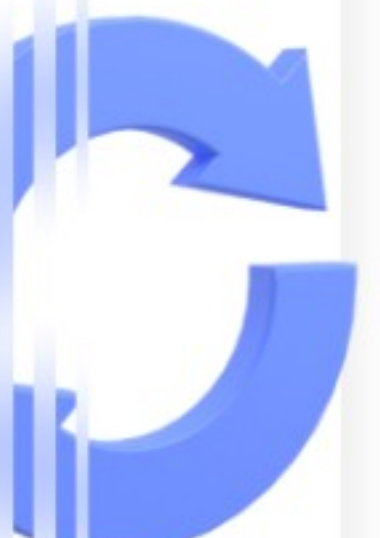
Infoway's tracking, interoperable e-health access expanded from one province in 2006 to all jurisdictions by 2019. They provide patient lab results and records across care sites. Full cross-province linking is limited.



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.



PMC

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](#)

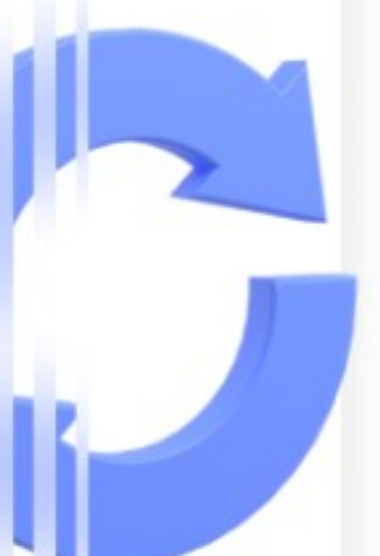


Updates

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.



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.



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.



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.

NEEDS

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

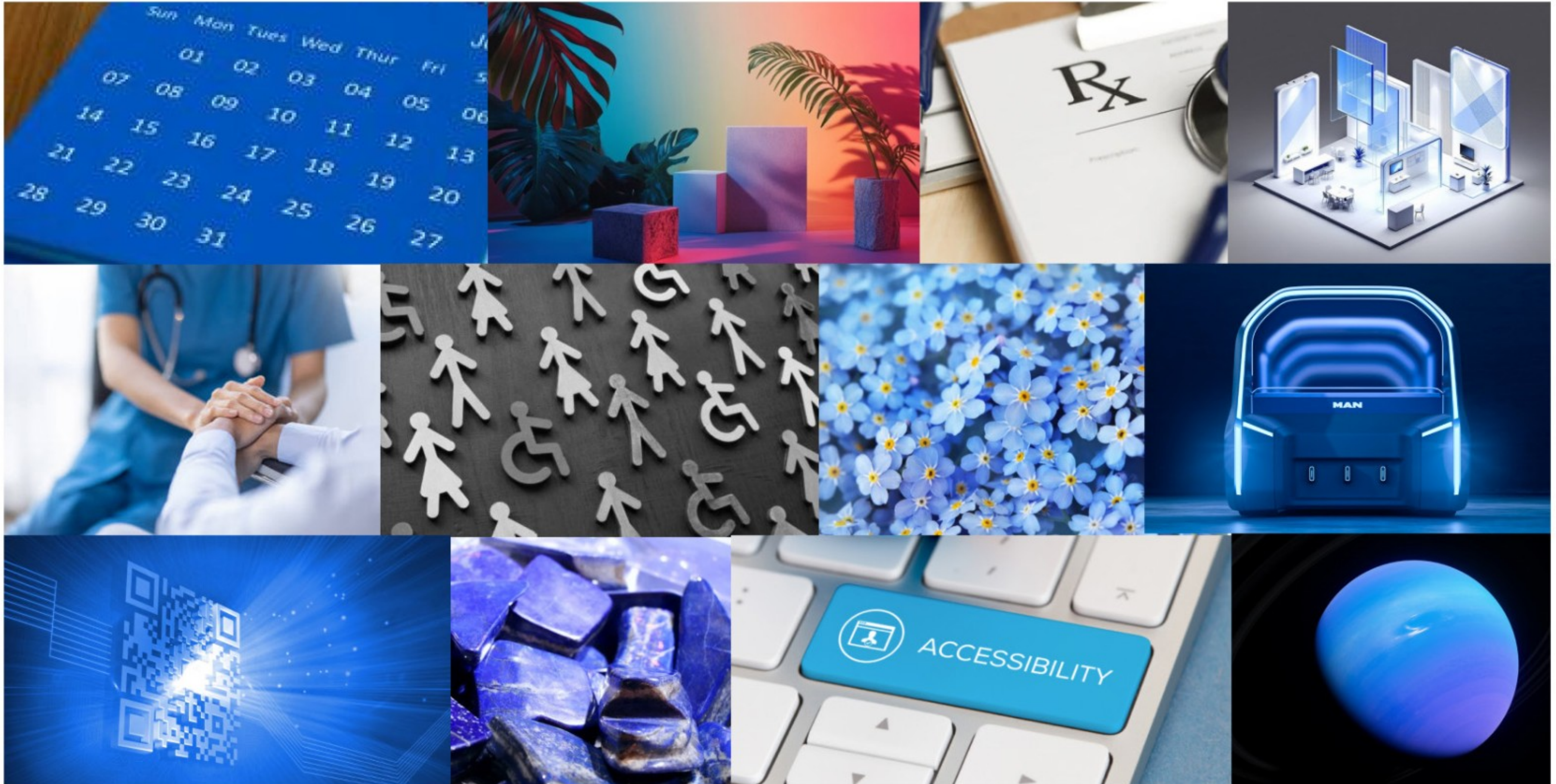
GOALS

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

EXPERIENCES

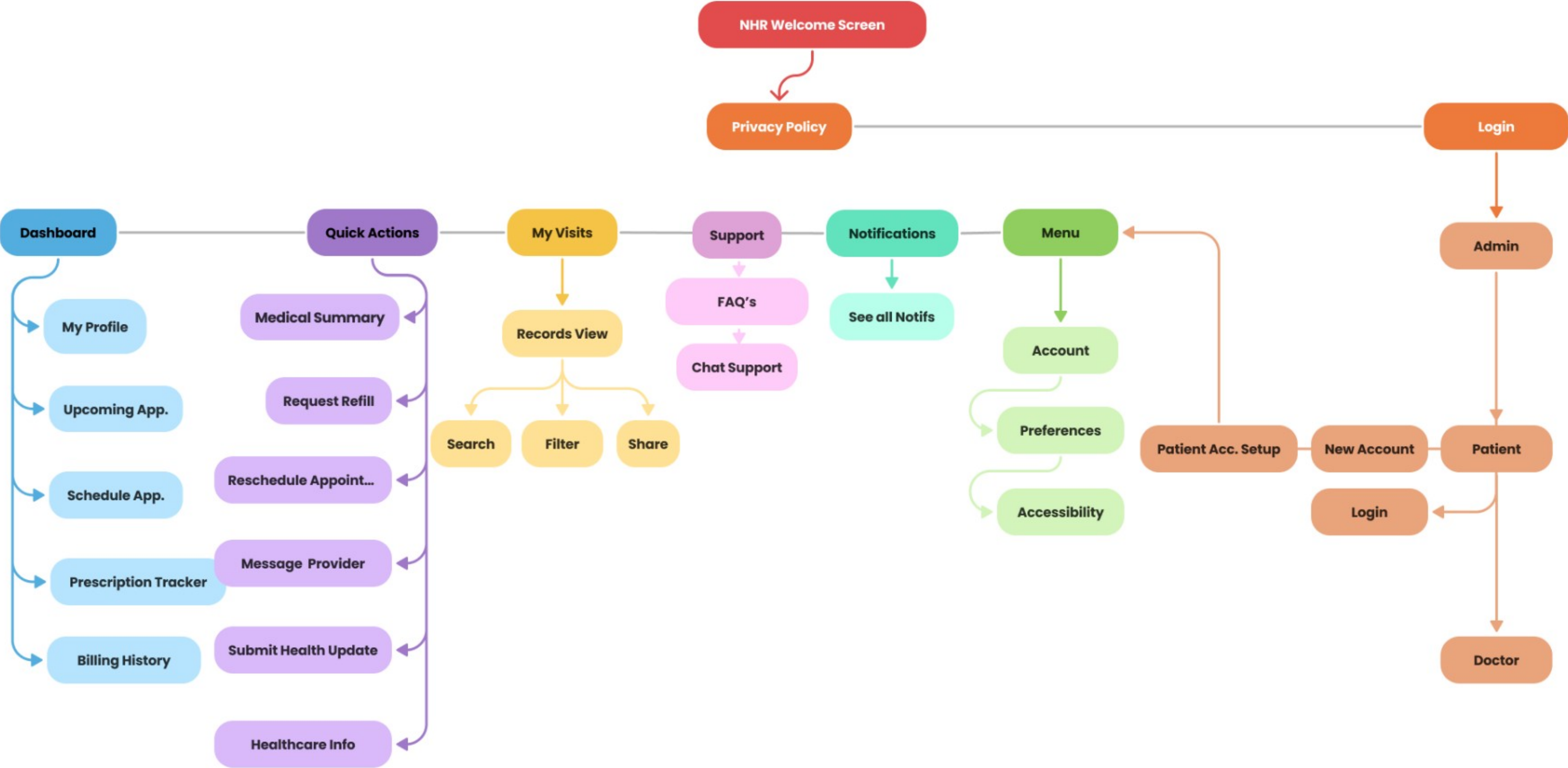
- 😞 Finds it frustrating when lab results or histories are unavailable from other providers.
- 😞 Believes a centralized, interoperable EHR would improve patient safety and cut down on me

Moodboard



Deliver

Information Architecture



Low-Fidelity Prototype

←

LOGIN TO DIAGNOSTICIAN ACCOUNT

User Name

Password

NEW DIAGNOSTICIAN

Dashboard Messages Support Patient Records Logout

ADD PERSONAL DETAILS PATIENTS DETAILS

Patient ID Age

Patient Name Gender

Patient Phone Blood Type

Patient Address Major Disease

ADD

Dashboard Messages Support Patient Records Logout

ADD PERSONAL DETAILS PATIENTS DETAILS

Name Michelle Torff

ID P001

Phone +15079521909

Address 233 5th Ave Ext, NY 10095

Age 35

Gender Male

Blood Type O+

Major Disease Hypertension

CANCEL CONFIRM DELETE

Dashboard Messages Support Patient Records Logout

PATIENTS DETAILS

Name	ID	Phone	Address	Age	Gender
Michelle Torff	P001	+15079521909	233 5th Ave Ext, NY 10095	35	Male
Chance Vernon	P002	+1542812098	352 Palmer Road, MA 1082	42	Male
Ann Korggaard	P003	+187669508209	2405 Turnpike, NY 11594	55	Female
Angel Arcand	P004	+1924014374098	11 Jungle Road, MA 1403	48	Male

ADD UPDATE DELETE

Dashboard Messages Support Patient Records Logout

CONFIRM PATIENT DETAILS APPOINTMENT BOOKING

Patient ID (Pre-populated) 190909

Patient Name (Pre-populated) Andrew Yan

Reason Choose

Provider Name Choose

Age 43

Gender Male

Blood Type

Diagnosis Ulcer and Appendix Disfigure...

NEXT

←

LOGIN

LOGIN AS ADMIN

LOGIN AS DIAGNOSTICIAN

LOGIN AS PATIENT

←

CREATE A NEW ACCOUNT

DIAGNOSTICIAN DETAILS ENTRY

PATIENT DETAILS ENTRY

Dashboard Messages Support Patient Records Logout

ADD PROVIDER DETAILS PROVIDER'S DETAILS

Name

Available hours per Day

Provider ID

Password

ADD

Dashboard Messages Support Patient Records Logout

PATIENTS DETAILS

Name	ID	Phone	Address	Age	Gender	Blood Type	Major Disease
Michelle Torff	P001	+15079521909	233 5th Ave Ext, NY 10095	35	Male	O+	Hypertension
Chance Vernon	P002	+1542812098	352 Palmer Road, MA 1082	42	Male	O-	Asthma
Ann Korggaard	P003	+187669508209	2405 Turnpike, NY 11594	55	Female	A+	Arthritis
Angel Arcand	P004	+1924014374098	11 Jungle Road, MA 1403	48	Male	O-	Cancer

ADD UPDATE DELETE

Dashboard Messages Support Patient Records Logout

ADD PROVIDER DETAILS PROVIDER'S DETAILS

Name Michelle Torff

ID P001

Available Hours 10

Password 1234567890123456

CANCEL CONFIRM DELETE

Dashboard Messages Support Patient Records Logout

Diagn. Profile

Patient Dashboard

Appointments

Patient Health Records

Messages

Today's Patients 12 Pending Records 5 Requests 3

Recent Patients

Patients Profile Last Visit View Record

Patients Profile Last Visit View Record

Recent Activities

Update saved for patient ABC # 192009

New Message from Provider XYZ regarding patient care

Dashboard Messages Support Patient Records Logout

Diagn. Profile

Patient Dashboard

Appointments

Patient Health Records

Messages

Today's Appointments 12 Upcoming Appointments 5

Today's Appointments

15 16 17 18 19

Dashboard Messages Support Patient Records Logout

Diagn. Profile

Patient Dashboard

Appointments

Patient Health Records

Messages

Today's Appointments 12 Upcoming Appointments 5

Upcoming Appointments

15 16 17 18 19

Dashboard Messages Support Patient Records Logout

Notifications

Prescription

Patient Name: Abby Hine

Prescription

80 - every day

100 - 1x a day

100 - 1x a day

100 - 1x a day

100 - 1x a day

100 - every morning

100 - every night

100 - every 2 hours

100 - every other day

100 - at bedtime

PRINT

PREVIOUS

Dashboard Messages Support Patient Records Logout

Diagnosis Summary

Prescriptions

Patient Name: Abby Hine

Prescription

80 - every day

100 - 1x a day

100 - 1x a day

100 - 1x a day

100 - 1x a day

100 - every morning

100 - every night

100 - every 2 hours

100 - every other day

100 - at bedtime

PRINT

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



Last Update: 04/16/2025

In the May 2025 update (v1.3.4), several enhancements were rolled out to improve both functionality and user experience. A smarter, more responsive patient search feature has been introduced, allowing providers to filter results by visit date, diagnosis, and attending provider. For those working late shifts, a beta version of Dark Mode has been added to reduce eye strain and improve nighttime usability.

From a security sand, this release included important backend upgrades. Session timeout logic has been tightened to prevent access from unattended, idle sessions, and the encryption framework has been updated to meet the latest FIPS standards, ensuring secure data handling across the system.

Terms & Conditions

1. By accessing or using the CHR system, you agree to comply with and be bound by these Terms and Conditions. If you do not agree, you must not access or use the system.
2. Access to CHR is granted solely for purposes related to patient care, treatment, and healthcare operations. Any unauthorized use, including but not limited to accessing records without a legitimate purpose, is strictly prohibited.
3. Users are responsible for maintaining the confidentiality of their login credentials. Sharing credentials or using another user's credentials is prohibited and may result in termination of access.
4. CHR complies with all applicable data privacy laws, including HIPAA. Users must handle all patient data in accordance with these laws and institutional privacy policies.

Reject

Accept

Accept Privacy Policy
to be flown onto the **Welcome Screen**

Get Started
to the **Account Login Options**



Welcome to Community Health Records

Navigating Your Health, Community wide.

Get Started



Login Options

Login as Admin

or

Login as Patient

or

Login as Provider

Don't have an account? [Sign Up](#)



Account Types

Admin Login

Username *
Enter username

Password *
Enter password

[New Admin](#) [Login](#)

Trouble logging in? [Reset Password](#)

NHR

Patient Login

Username *
Enter username

Password *
Enter password

[New Patient](#) [Login](#)

Trouble logging in? [Reset Password](#)

Provider Login

Username *
Enter username

Password *
Enter password

[New Provider](#) [Login](#)

Trouble logging in? [Reset Password](#)

Choose between **Admin Login**, **Patient Login** or **Provider Login**

Patient Account Setup

9:41 Mon Jun 10

NHR

Patient Account Setup

Next

←

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

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

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

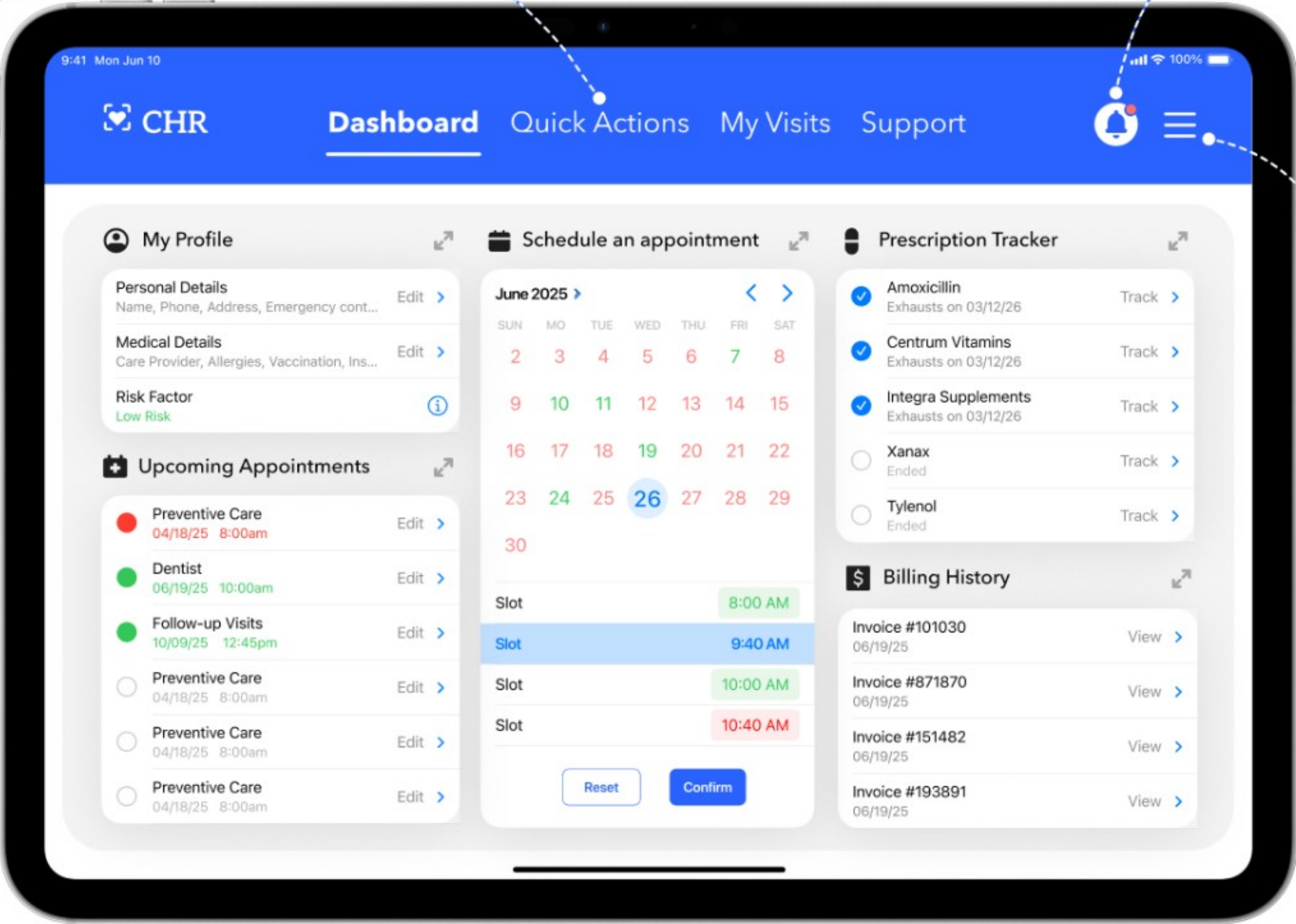
Major Diagnosis *

Select

Patient Dashboard

Explore **Quick Actions** from the Navigation Bar

Access **Notifications** from the Navigation Bar



Quick Action Items

- View Medical Summary
- Request Refill
- Reschedule Appointment
- Message Provider
- Submit Health Update
- Learn About Your Healthcare

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.

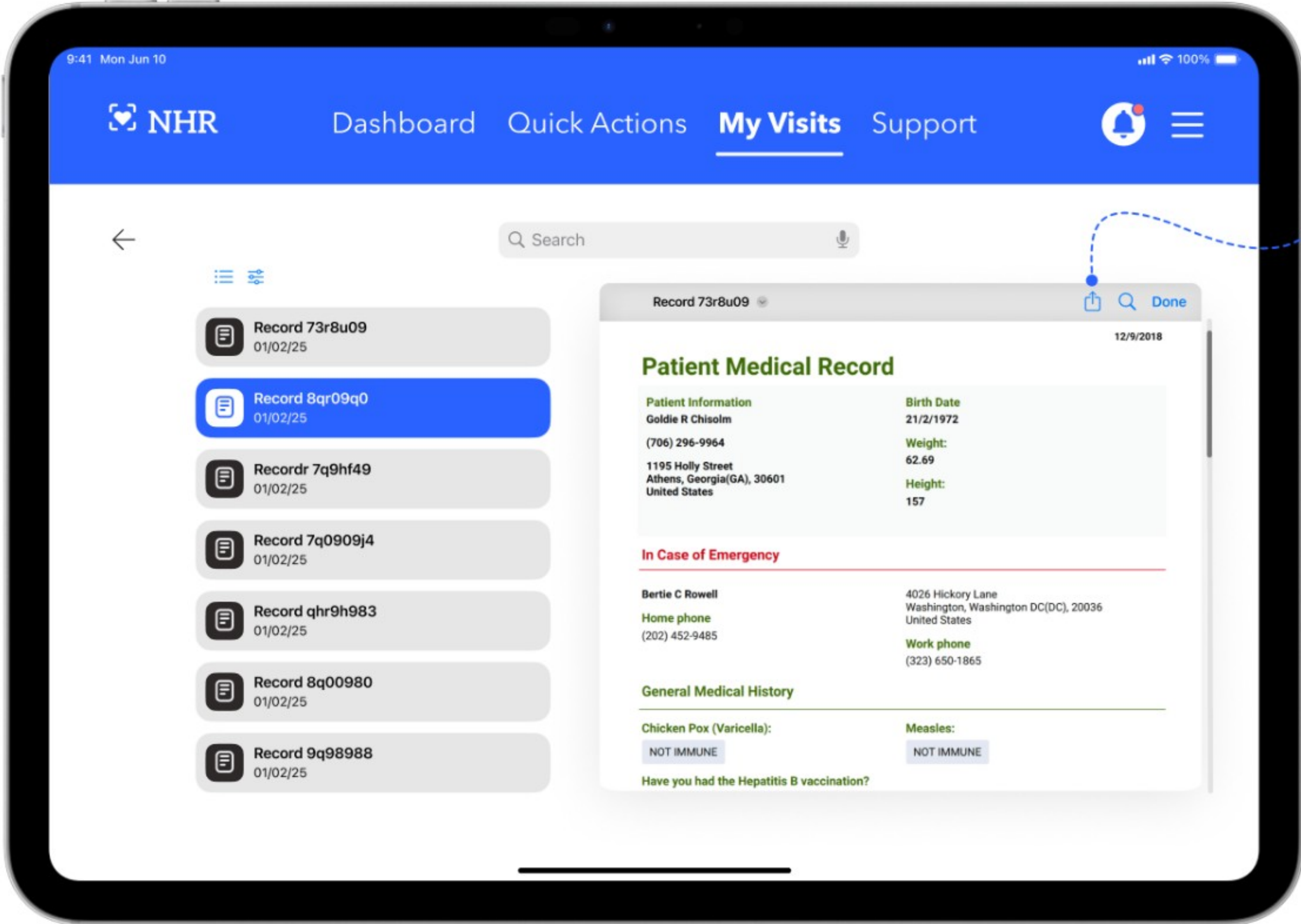
[See more](#)

Options

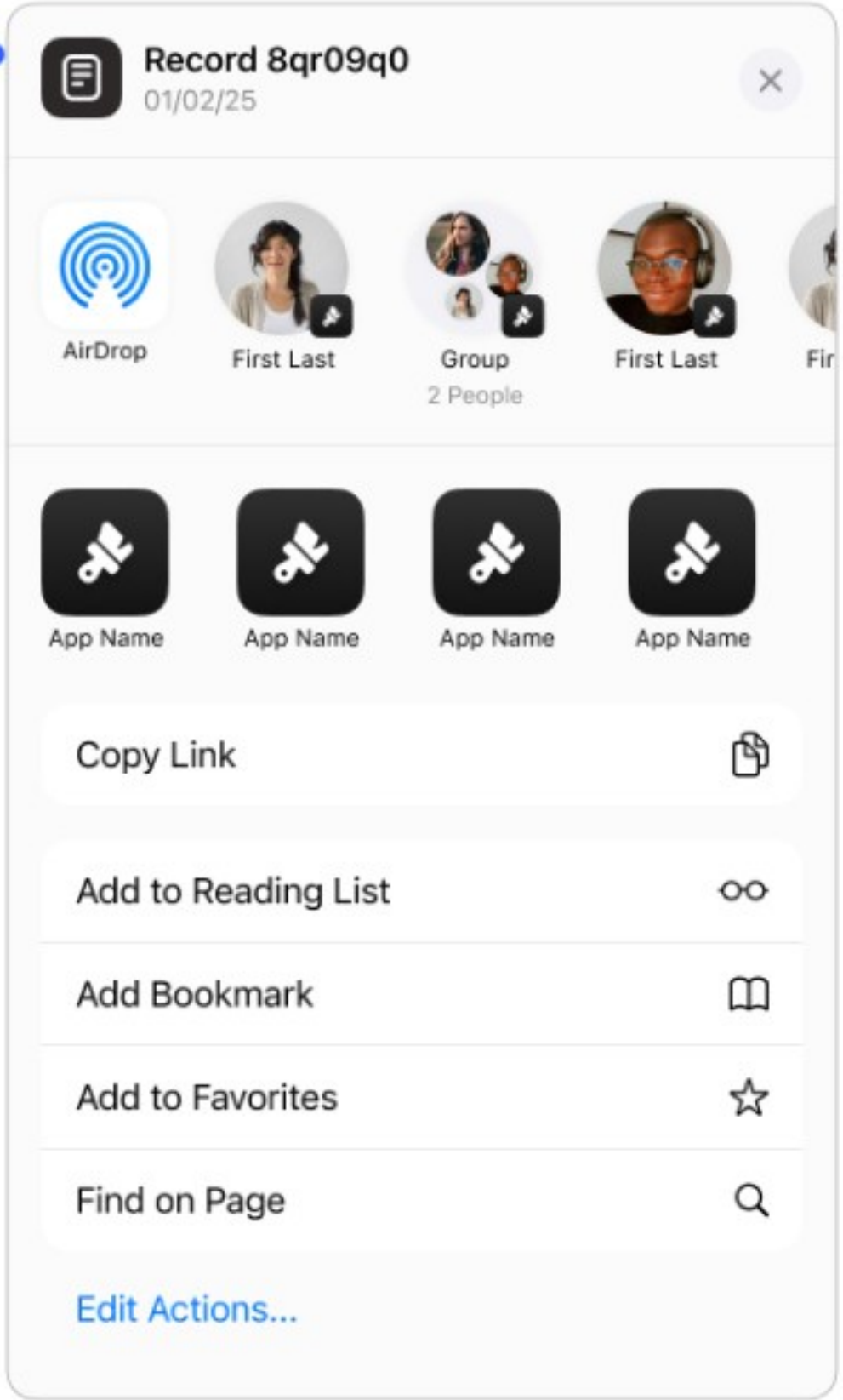
- Account
- Preferences
- Accessibility
- Log out

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?

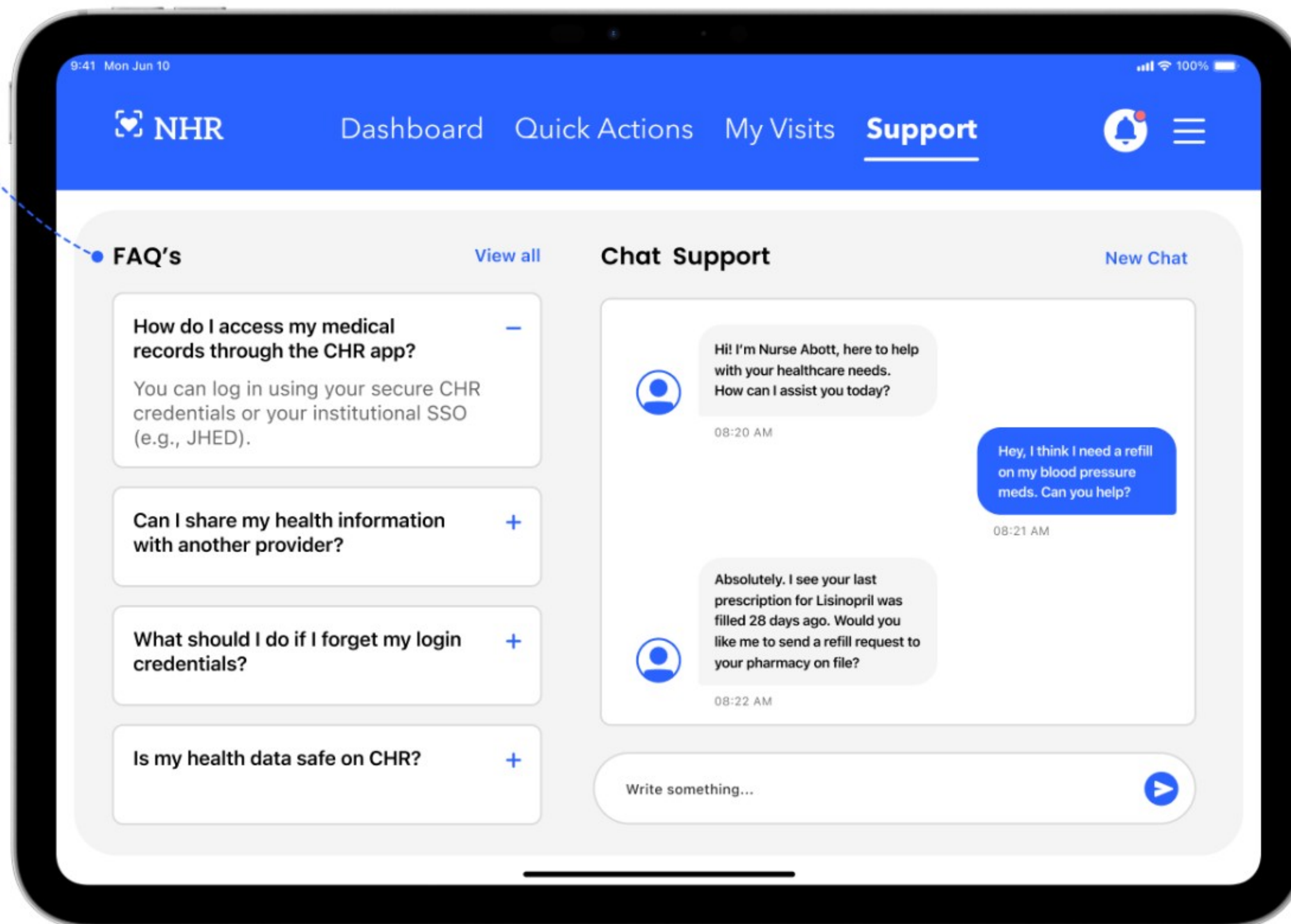
Yes, use the "Share Record" feature to securely send your data to any authorized provider.

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

9:41 Mon Jun 10

100%

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

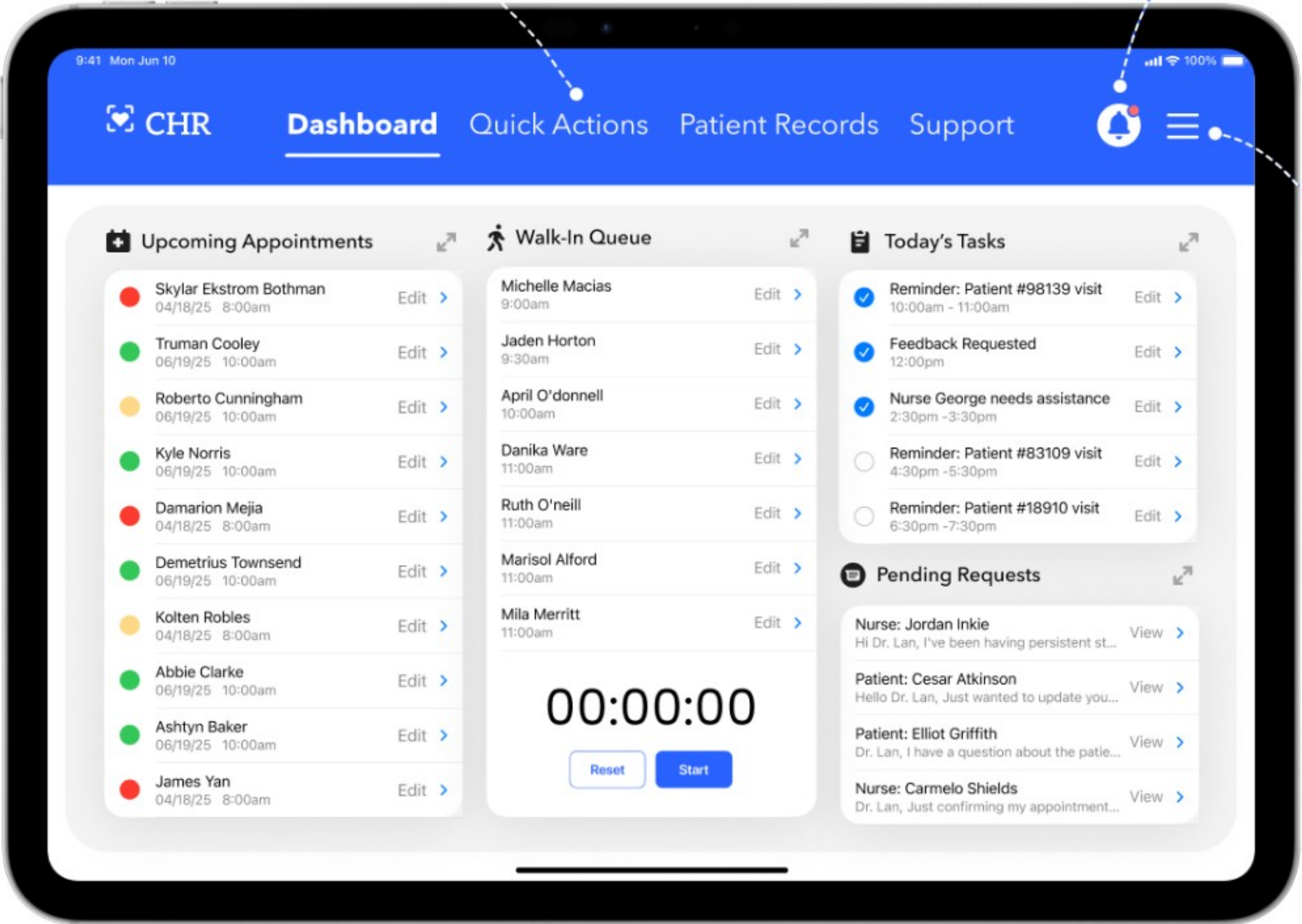
Emergency Contact *

Full Name

Provider Dashboard

Explore **Quick Actions** from the Navigation Bar

Access **Notifications** from the Navigation Bar



Quick Action Items

Add New Note

Create New Appointment

Create New Walk-In

Sign / Authorize

Clear My Schedule

My Status

Notifications

17

Appointment Reminder

Refill Request Submitted

Chart Requires Signature

"New message from Mia S.: 'Experiencing...

Nurse Note Added

System Maintenance Notice

New Patient Assigned

Chat from Dr. Adam

[See more](#)

Options

Account Details

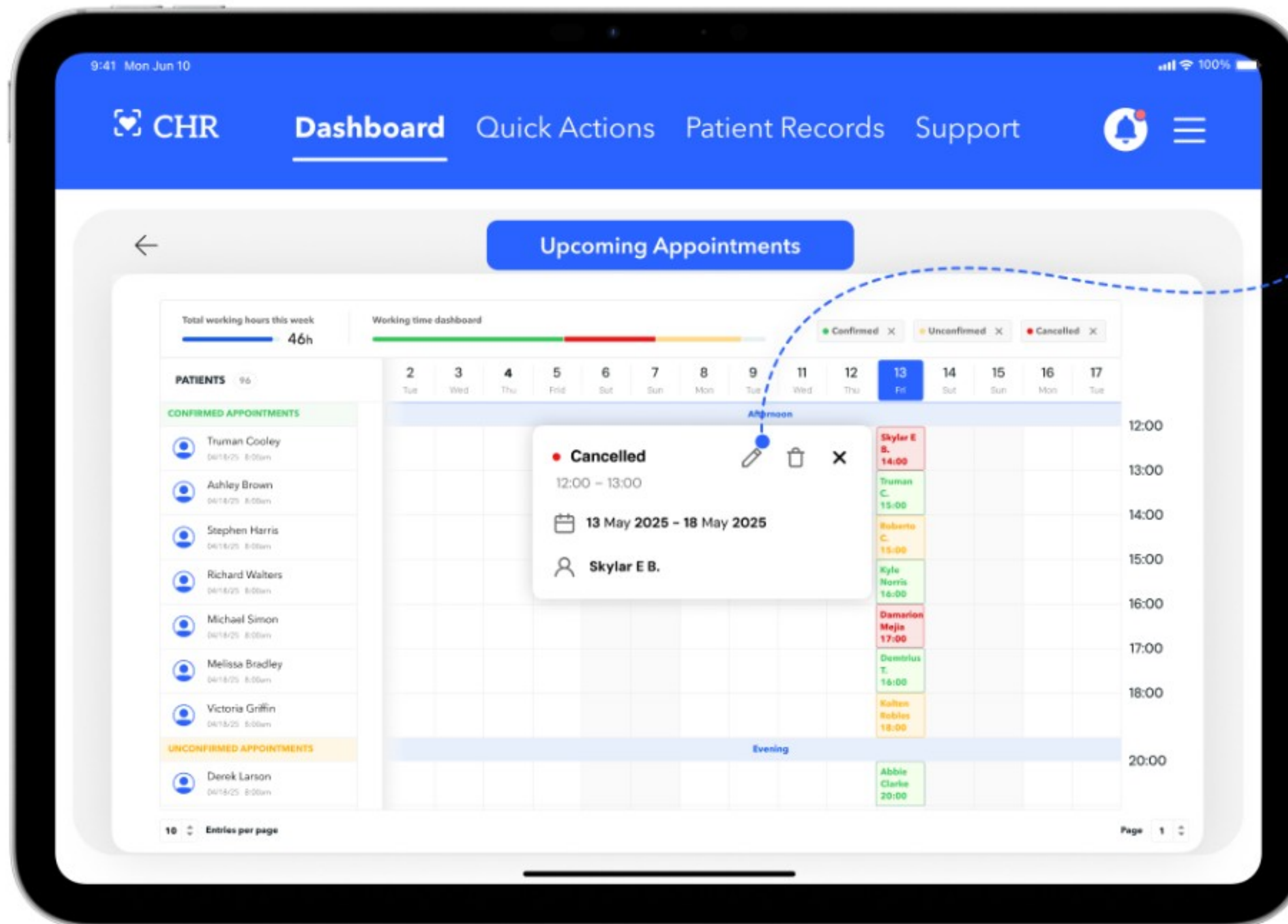
Help

Log out

Access **Options** from the Navigation Bar

Upcoming Appointments

Individual **Edit Appointment**
feature for customization



Edit Appointment

Skylar Ekstrom Bothman
04/18/25 8:00am

[Cancel](#) [Save](#)

Details [Reset Changes](#)

Diagnosis

Symptoms

☒ Aches and pains

☒ Breathlessness

☒ Cough

☒ Dizziness

☒ Eye irritation

[Show more](#)

Prescriptions

Notes [Edit](#)

PATIENT: S.E.B
DATE: 2025-03-25

- 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

9:41 Mon Jun 10

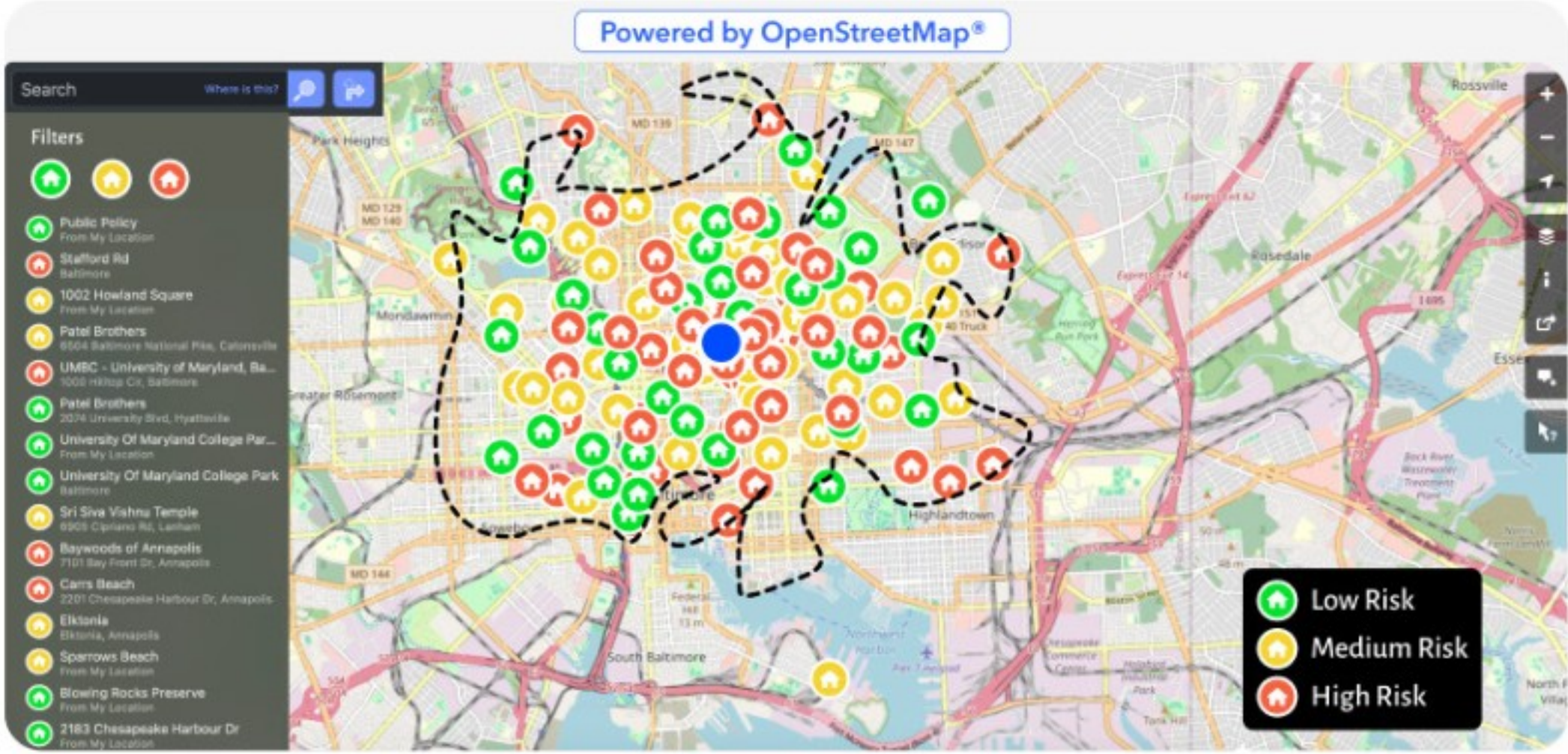
CHR Dashboard Quick Actions **Patient Records** Support

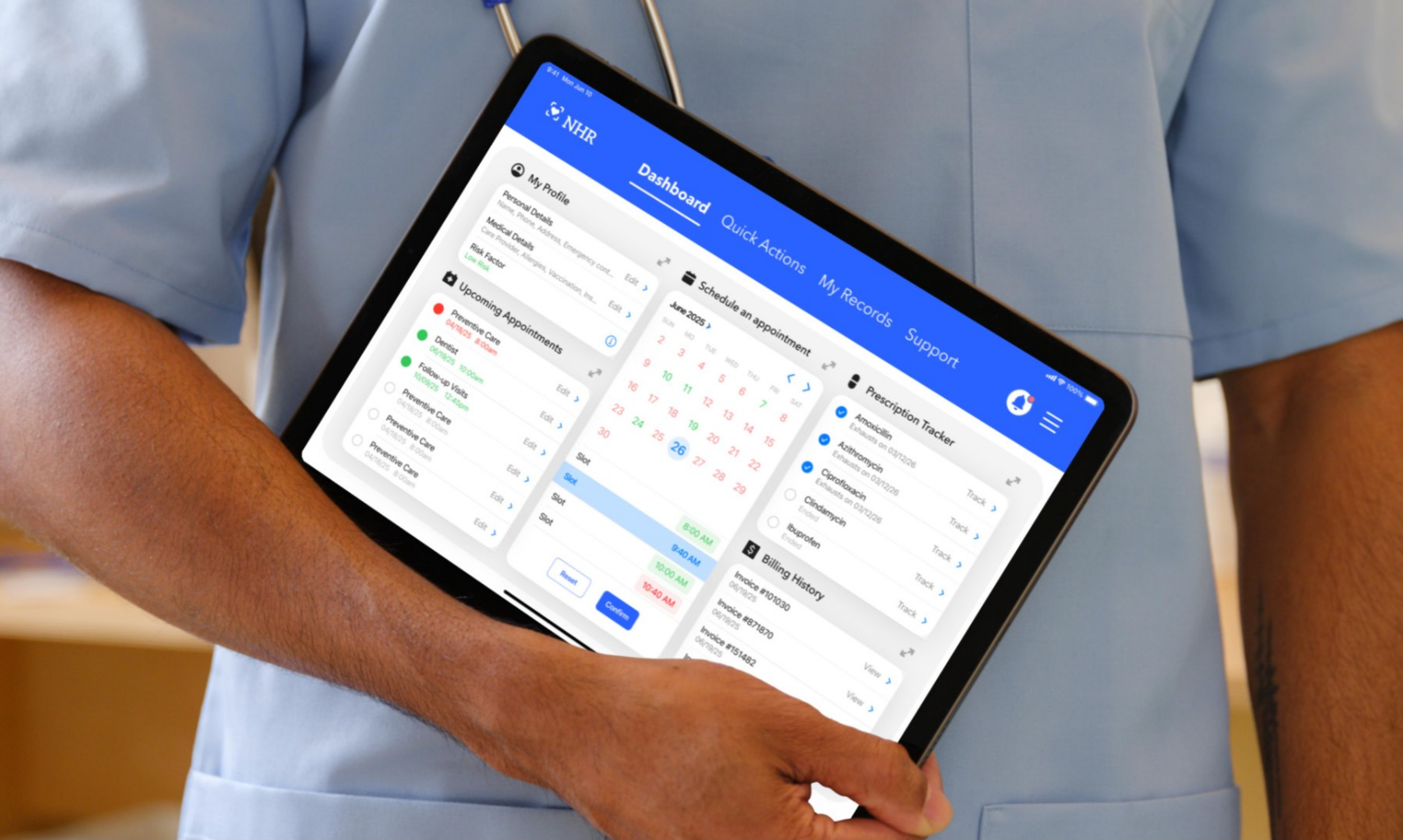
Search

Geo Mode ☐

Name	ID	Phone	Address	Age	Gender	Blood Type	Risk Factor
Michelle Torff	P002	+1507305213609	233 5th Ave Ext, NY 12095	35	Male	O+	Low Risk
Chance Vetrovs	P003	+1543891285185	352 Palmer Rd, MA 10828	42	Male	B+	High Risk
Ann Korsgaard	P004	+1879636508289	2465 Turnpike, NY 11554	55	Female	AB-	Low Risk
Angel Arcand	P005	+1924314376038	11 Jungle Road, MA 1453	48	Male	O-	Medium Risk
Michelle Torff	P002	+1507305213609	233 5th Ave Ext, NY 12095	35	Male	O+	High Risk
Chance Vetrovs	P003	+1543891285185	352 Palmer Rd, MA 10828	42	Male	B+	High Risk
Ann Korsgaard	P004	+1879636508289	2465 Turnpike, NY 11554	55	Female	AB-	Medium Risk
Angel Arcand	P005	+1924314376038	11 Jungle Road, MA 1453	48	Male	O-	Medium Risk
Michelle Torff	P002	+1507305213609	233 5th Ave Ext, NY 12095	35	Male	O+	Low Risk
Chance Vetrovs	P003	+1543891285185	352 Palmer Rd, MA 10828	42	Male	B+	High Risk
Ann Korsgaard	P004	+1879636508289	2465 Turnpike, NY 11554	55	Female	AB-	Medium Risk

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





2025



UX design Portfolio

Thank You!

Sarthak Tavate



Phone

+1 (646) 318-9495



Mail

stavate1@umbc.edu



LinkedIn

/sarthaktavate



Behance

/sarthaktavate



Website

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