

Name : Pranav Raj Sowrirajan Balaji

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Project - 1

Title: NexusNet - A Social Media Platform

Description:

NexusNet is not just another social media platform; it's a dynamic ecosystem where user experience is personalized to perfection. By harnessing the power of cutting-edge machine learning algorithms, NexusNet crafts a bespoke content journey for each user, ensuring that every scroll feels tailored to their interests and preferences. Users wield the power to fine-tune their content stream, curate their profiles, and immerse themselves in a world of high-quality educational and entertaining content. Whether it's delving into thought-provoking discussions or indulging in captivating multimedia experiences, NexusNet offers a plethora of avenues for users to explore and engage. But NexusNet isn't just about consumption—it's about collaboration and connection. Users can seamlessly share their own content with others, fostering a vibrant community of creators and collaborators. Through discussion channels, users can come together to brainstorm ideas, solve problems, or simply spark meaningful conversations. The platform ensures that users can post content, add captions to videos, comment & engage in discussion channels. In essence, NexusNet transcends the boundaries of traditional social media by empowering users to not only consume but also contribute, collaborate, and connect in ways that enrich their digital experience like never before.

Business Requirements / Key Features:

- The platform uses machine learning algorithms to customize user content based on user-preferences.
- Users have complete control over their content-preferences.
- Users can curate their profiles to showcase their personality, interests, and contributions accurately.
- The platform should prioritize displaying high-quality educational and entertaining content to enhance user engagement and satisfaction.
- Users can post their content, including text, images, videos, and links. They should also have the ability to interact with other users through messages, comments, and discussion channels.
- The platform should facilitate collaboration among users by allowing them to work on projects, share ideas, offer solutions, and pose questions through discussion channels.
- The platform must foster a sense of community by encouraging users to share content, engage in discussions, and collaborate with each other.
- The platform should be scalable to accommodate a growing user base and ensure optimal performance to deliver a seamless user experience.

- Ensure the security and privacy of user data, including robust authentication
- Gather user feedback on features and functionalities to continuously improve the user experience and meet evolving user needs.
- Login process should require just ID & phone number for authorization.
- User should be able to create, delete and update account details.
- No initial interest categories.

Nouns:

- NexusNet
- Social Media Platform
- Ecosystem
- User-Experience
- Users
- Content
- User-preferences
- Interests
- Content-stream
- Machine Learning
- Community
- Education sector
- Entertainment sector
- Profiles
- Account
- Bio
- Profile Picture
- Features
- ID
- Phone Number
- Categories
- Creator
- Collaborators
- Project / Ideas
- Discussion Channels
- Text, Images, Links
- Performance
- Security
- Privacy
- User - Data
- Authentication
- Feedback
- Features
- Functionalities

Verbs:

- Control
- Dynamic
- Scroll
- Customize/Tailored
- Display
- Focus
- Curate
- Post
- Comment
- Add captions
- User login
- Authorize
- Interact
- Recommend
- Create
- Delete
- Update
- Engage
- Enhance
- Share
- Offer solutions
- Pose questions
- Collaborate
- Discuss
- Contribute
- Connect

Categorize into Classes and their attributes:

User (Class):

Attributes:

- Name
- Phone number
- ID

Verbs: create, delete, post, comment, curate, add captions, login, share, connect

Profile (Class) :

Attributes:

- Bio
- Profile Picture
- Preferences
- Interests

Verbs: customize content, update

Content (Class)

Attributes:

- User preferences
- Categories

Verbs: post, display, interact, curate, focus (content)

Interaction (Class):

Attributes:

- Comments
- Captions

Verbs: engage/interact, post, comment, add captions, share, scroll

Discussion Channels (Class):

Attributes:

- Categories (Project , Ideas)
- Discussions (Text, Images, Links)

Verbs: interact/engage, post, comments, connect, contribute, offer solutions, pose questions, collaborate

Authentication (Class):

Attributes:

- ID
- Phone number

Verbs : login process, authorize

NexusNet Platform (Class):

Attributes:

- Users
- Features
- Feedback
- Functionalities

Verbs: authenticate

Primary Users / Target Audience:

Active users (students, content creators, working professionals) who want to engage and interact with other users based on their preferences.

User Dimensions:

1. Active Users vs Passive Users (Minimal Interaction i.e. scrolling for fun!).
2. Technical Users (discuss project/ideas, collaborate, connect) vs Non-technical users (post content, watch videos)
3. High social media presence (Content Creators / Influencers) vs low social media presence (Normal Users)
4. Old users vs young users

Main User Dimensions:

1. Active Users vs Passive Users (Minimal Interaction i.e. scrolling for fun!).
2. Technical Users (discuss project/ideas, collaborate, connect) vs Non-technical users (post content, watch videos)

User Personas:

1. Shyam (Age: 22) (Active User, Technical User)

Background: Student at KU Leuven undertaking Master's in Data Science.

Scenario: Shyam seeks control over his content consumption and values high-quality informational videos related to his field. He is an active user who wants to engage with other users in discussion forums specific to his program.

Reason to Use: To customize his content experience and engage with data science related content.

2. Tushar (Age: 23) (Active User, Non Technical User)

Background: Business Analyst at McKinsey.

Scenario: Tushar desires a platform where he can interact with other users by posting useful content and also use it watch content relevant to his choices.

Reason to Use: To post useful content and watch customized content.

3. Andy : (Age: 24) (Passive User, Technical User)

Background: PhD student specializing in Machine Learning domain at Purdue.
Hard-working student with very minimal social media presence and only uses the platform for productive interactions.

Scenario: Mickey wants to explore educational content to understand and expand his domain knowledge for his current research thesis.

Reason to Use: To discover high-quality educational videos and engage with content relevant to his profession.

4. Robert (Age : 21) (Passive User, Non Technical User)

Background: Undergrad Psychology student at Ohio State University. He spends a lot of time on social media apps to relax.

Scenario: Robert seeks entertainment during his leisure time and prefers content tailored to his interests.

Reason to Use: To unwind with entertaining videos and stay informed about topics of interest.

User Stories & Use Case:

1. User: Shyam

Task / Action: Customize Content Preferences

Use Case: Shyam wants to customize his content preferences to focus on high-quality informational videos related to data science, allowing him to curate his content experience and interact with other users in discussion forums.

2. User: Tushar

Task / Action: Post Useful Content

Use Case: Tushar aims to post useful content related to business analytics on the platform, enabling him to share valuable insights with other users and contribute to the community.

3. User: Andy

Task / Action : Discover Educational Content

Use Case: Andy seeks to discover high-quality educational videos relevant to his field of study in machine learning, allowing him to deepen his understanding and expand his domain knowledge for his research thesis at Purdue University.

4. User: Robert

Task / Action: Explore Entertaining Content

Use Case: Robert wants to unwind during his leisure time by exploring entertaining videos tailored to his interests, allowing him to relax and stay informed about topics of interest.

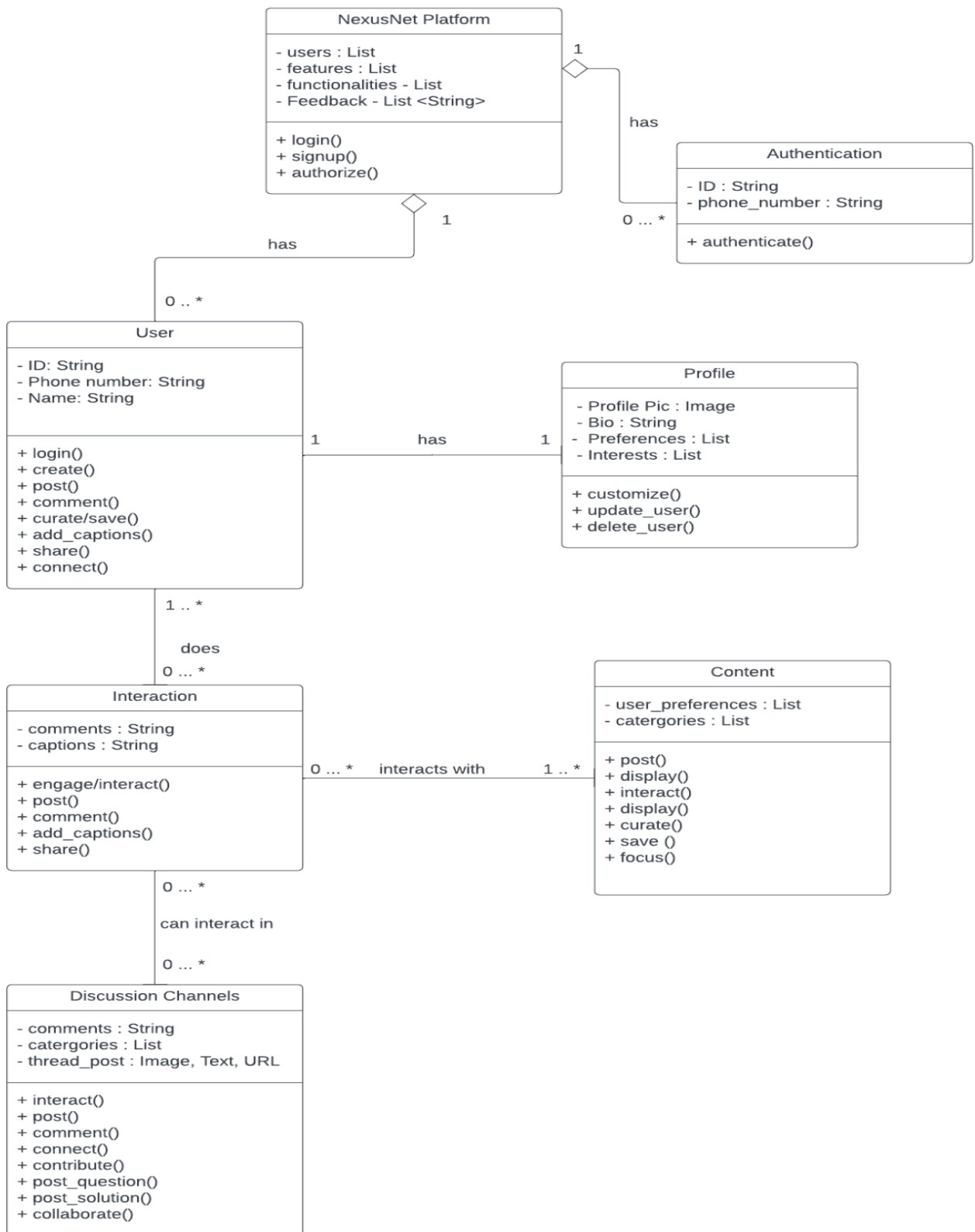
UML Diagram:

Explanation:

NexusNet Platform: Has an aggregation relationship with users, since the platform is comprised of users, but can be an existing independent entity without users also. This is a one to many type, which means for the platform there can be a number of users.

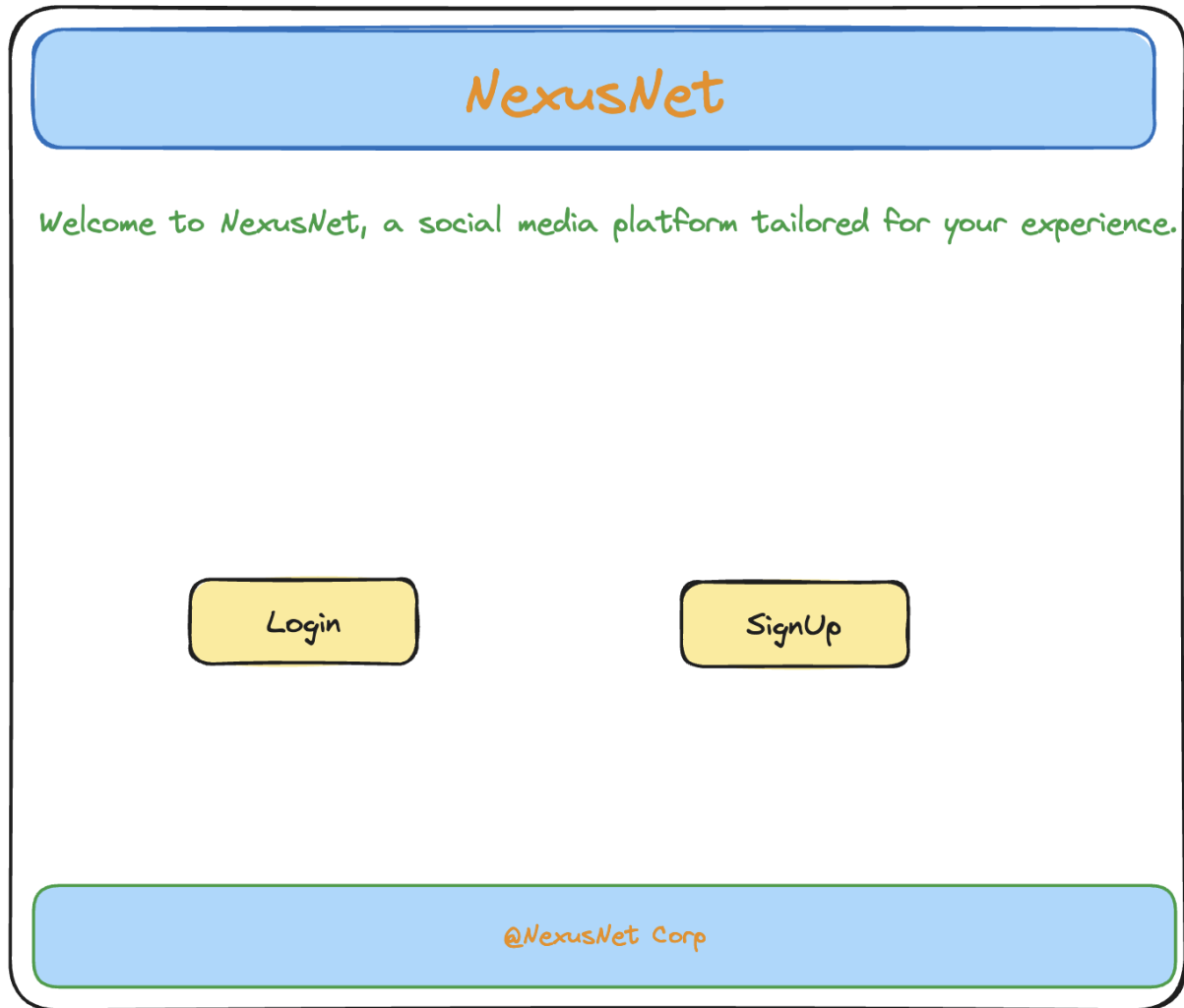
User: Has an association with Profile, this is an one-to-one type of association. Since each user can create only profile. A challenge question here is that: Can a user have multiple accounts?. It also has an association with Interaction, each user can do multiple interactions with contents.

Interaction: Has an association with content, there can be either no interaction or multiple interactions with a single or multiple contents. It also has an association with discussion channels where the interaction type is many-to-many.



Low Fidelity Mockups:

Landing Page: SignUp and Login options for User.



SignUp Page: With fields Name, ID & Phone number.

A hand-drawn sketch of a web page for NexusNet. The page is enclosed in a rounded rectangle with a black border. At the top, there is a light blue header bar with the text "NexusNet" in orange. Below the header, a green line of text reads "Welcome to NexusNet, a social media platform tailored for your experience." In the center of the page, there are two yellow buttons with black outlines: "Login" on the left and "SignUp" on the right. At the bottom, there is a light blue footer bar with the text "@NexusNet Corp" in orange.

NexusNet

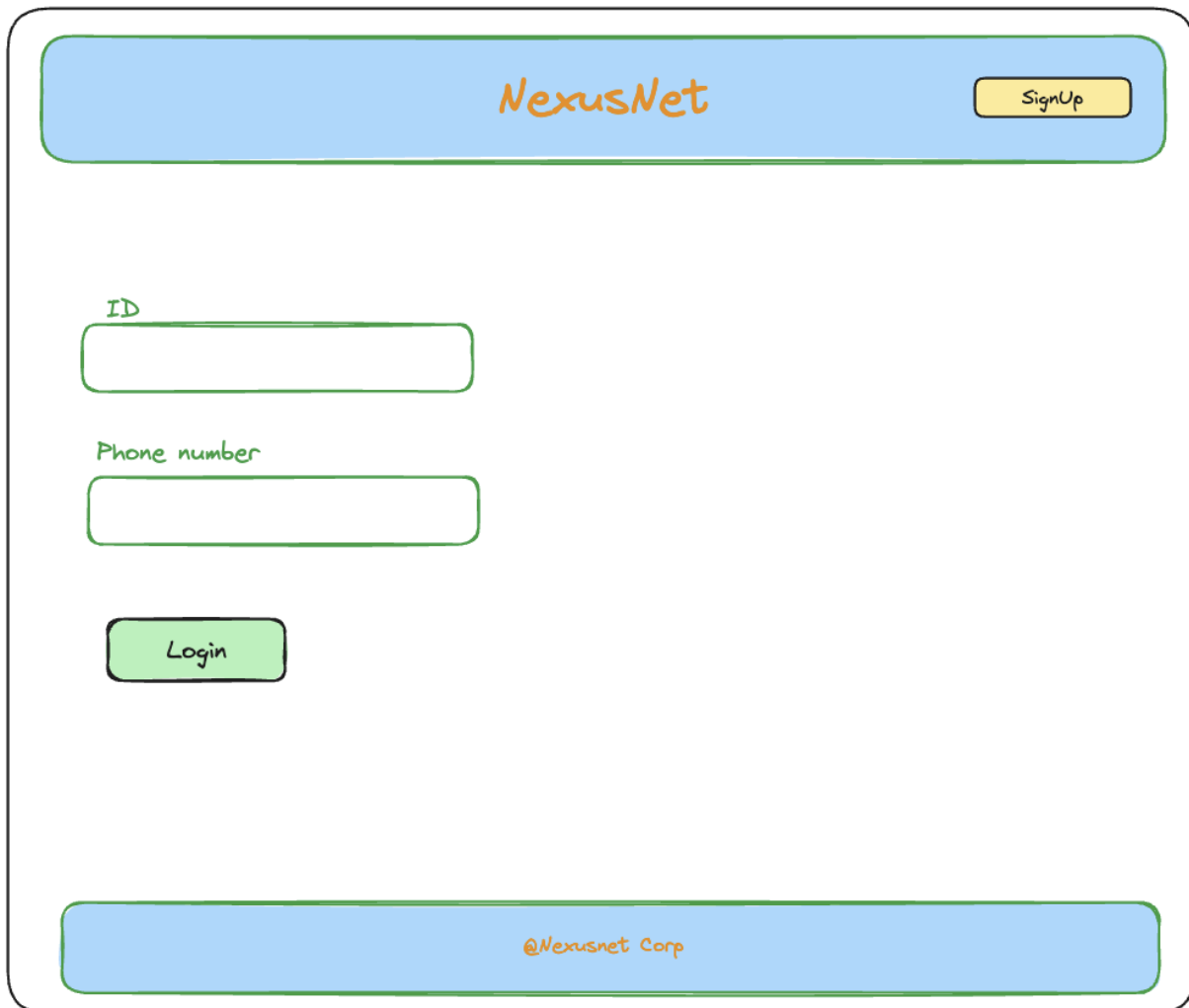
Welcome to NexusNet, a social media platform tailored for your experience.

Login

SignUp

@NexusNet Corp

Login Page : Allows user to login with existing ID and phone number.



A hand-drawn login page for NexusNet. The page is enclosed in a rounded rectangle with a black border. At the top, there is a light blue header bar with the text "NexusNet" in orange script font on the left and a yellow "SignUp" button on the right. Below the header, the main area is white. It contains two input fields: the first is labeled "ID" in green and the second is labeled "Phone number" in green. Below these fields is a green "Login" button. At the bottom, there is a light blue footer bar with the text "@Nexusnet Corp" in orange script font.

NexusNet

SignUp

ID

Phone number

Login

@Nexusnet Corp

User Profile Page: Allows user to add preferences, edit their personal details/bio & profile picture. Watch content takes them to their video feed.

Watch Content

NexusNet

Settings

Profile Picture

Preference

Machine Learning
Data Science
AI
ChatGPT

Name

ID

Phone number

Bio

Update

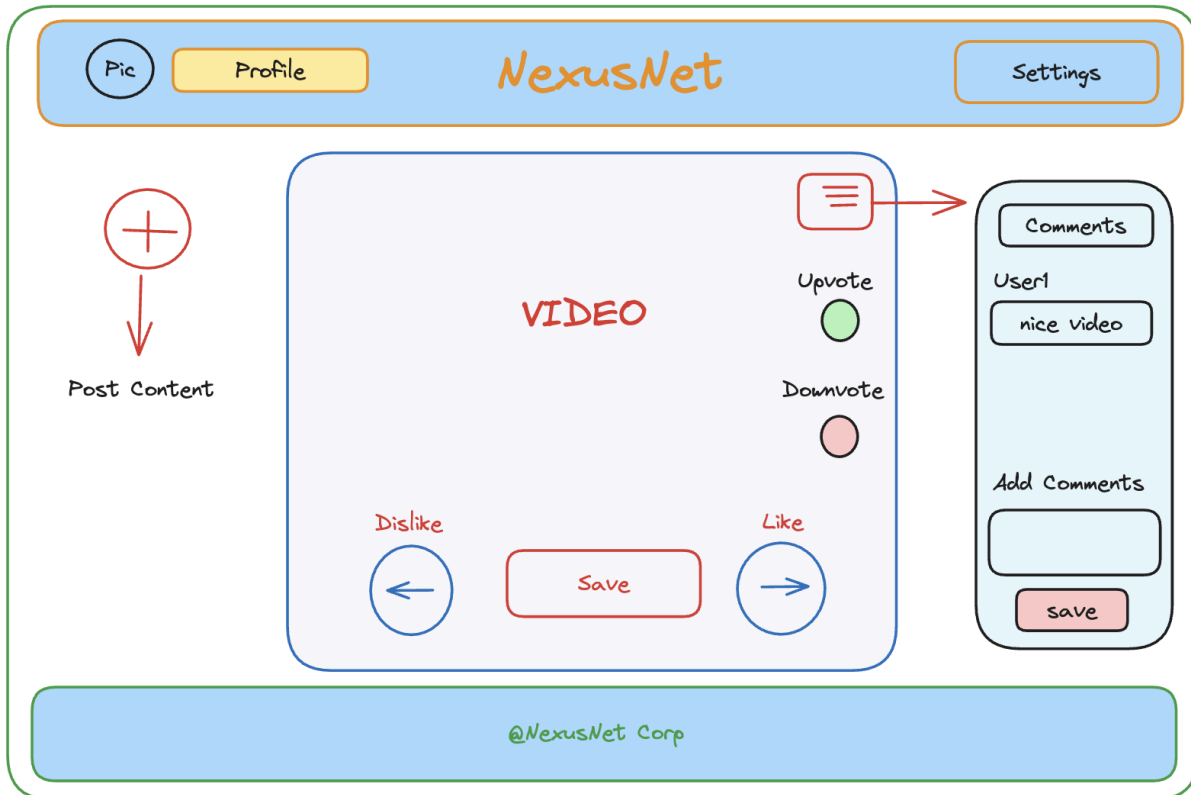
Pranav Raj

Pranav@2501

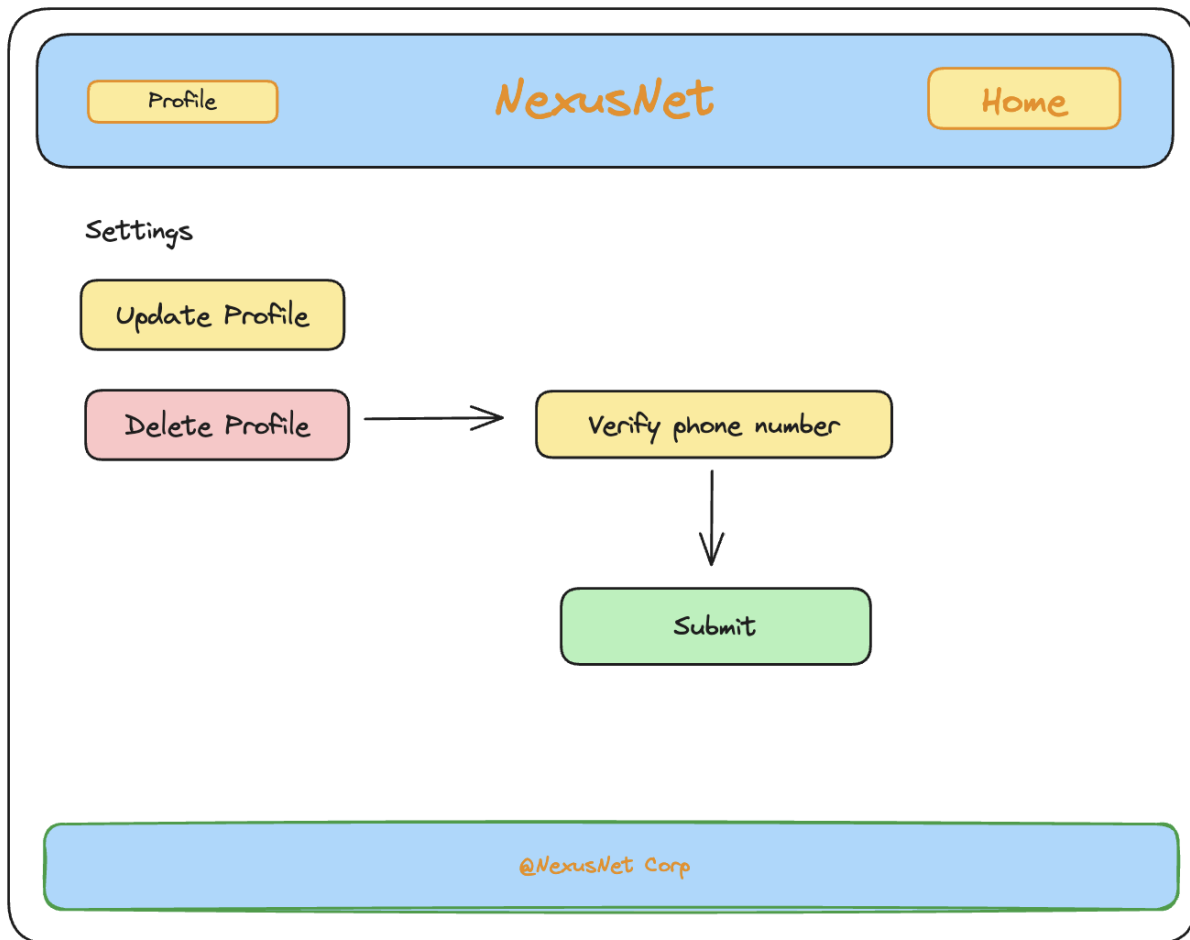
678 901 2678

@NexusNet Corp

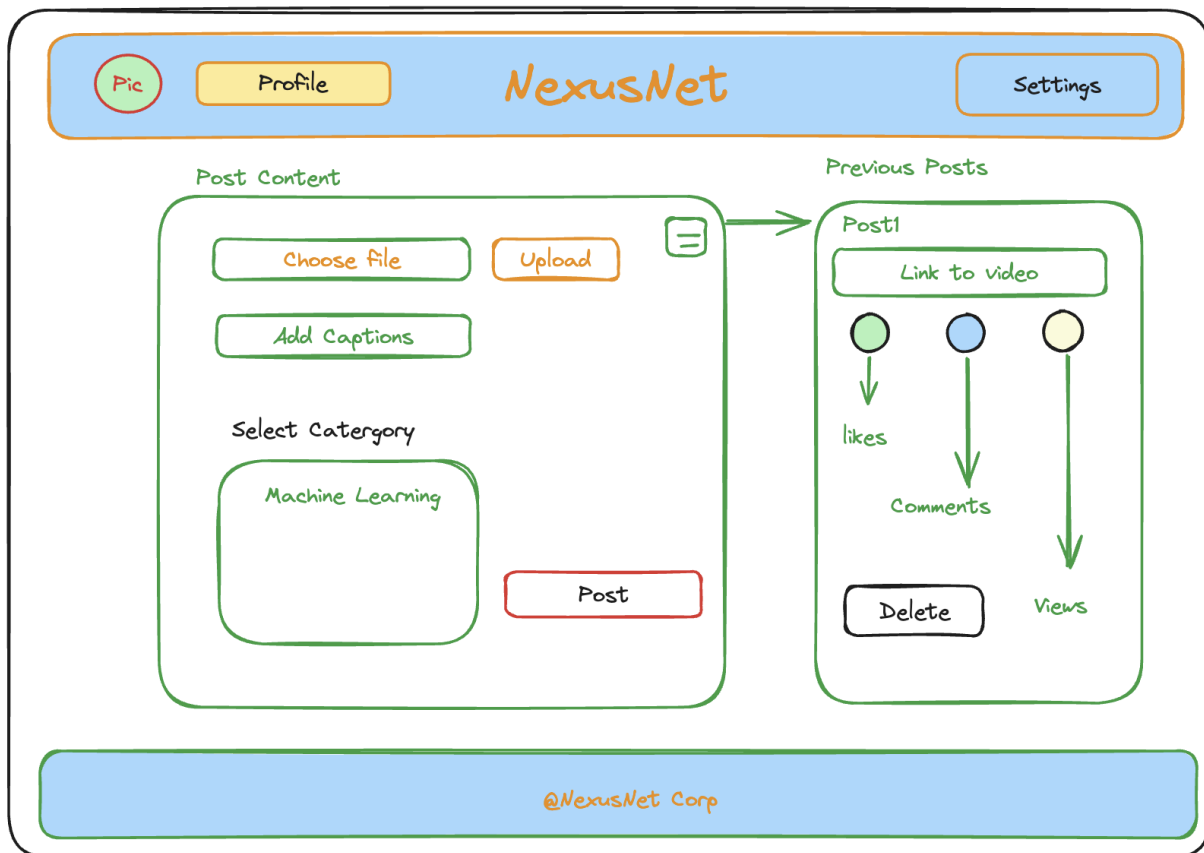
User Feed: Shows suggested videos to user, along with option to swipe right or left. It also allows the user to add comments, upvote or dowvote, save the video.



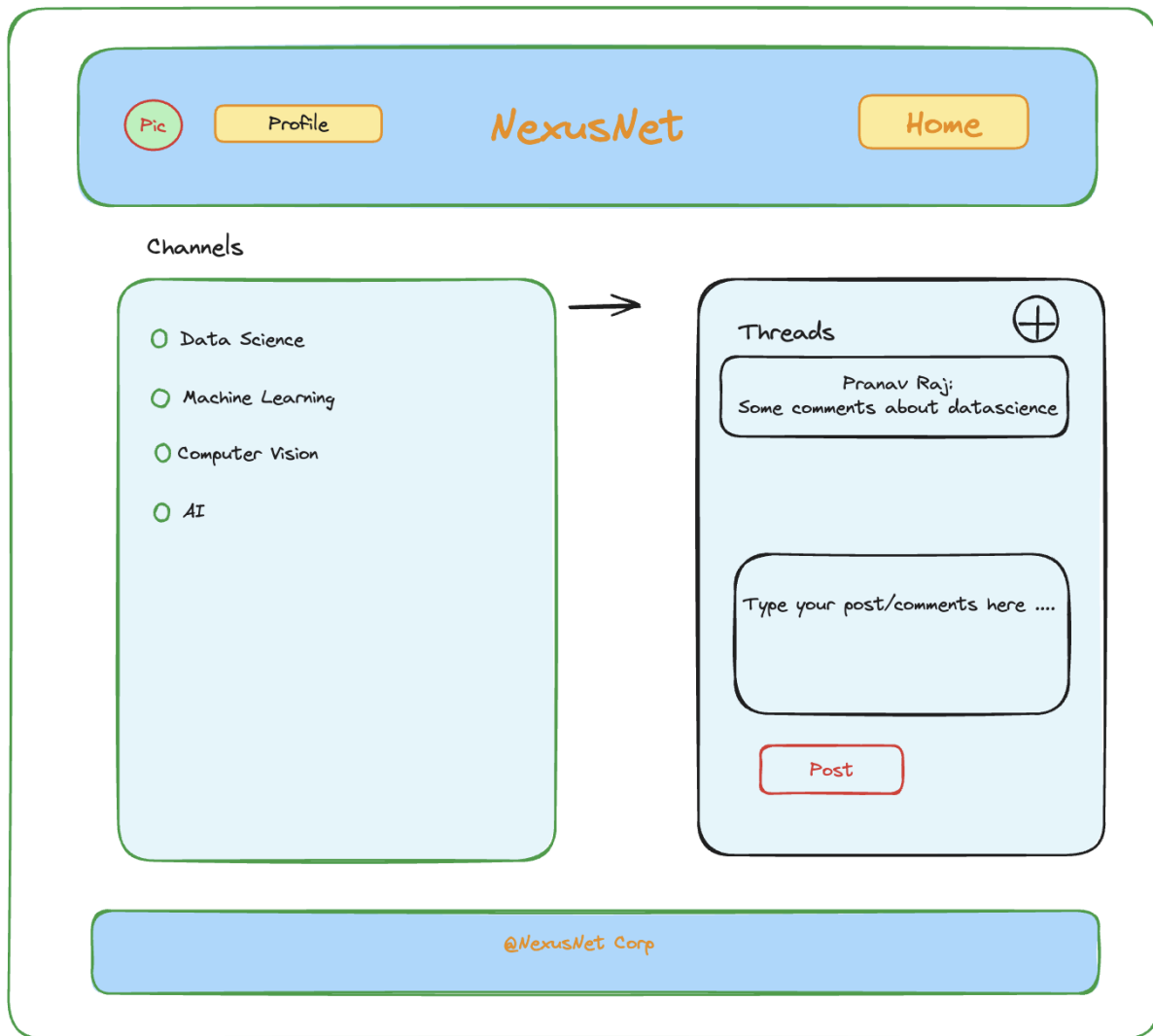
Settings Page: Allows user to update profile or delete profile with user verification.



Post Content Page: Allows user to upload a video with captions and select the relevant category. Along with an option to see their analytics of the previous video.



Discussion Channels : Users can post and interact in different channels



Rules

- The application should have authentication, each user should have an ID and phone number associated with their account.
- A post should include a valid video with no explicit or graphic content, along with well-defined captions and one or more categories.
- Allow users to choose and curate their content based on their specific interests.
- Avoid repetition of videos shown to the user.
- Ensure randomness to avoid showing repeated topics that are disliked by the user.

Challenge Questions (Questions for the client to check my understanding of the problem)

- Can a user have multiple accounts?.
- Would the application need two pages, one for the user to search for custom videos & the other for the application to suggest videos based on their preferences?
- What is the maximum time duration for a video to be posted? (ex 1min,2 min).
- Should the application include different sections for reels (short videos ~ 1 min) & longer videos (3 mins & above)?.
- What are the general community guidelines the user should follow?.
- Do we include moderator functions to review complaints issued by users?.