

Design Document

Project Name: NewsNode

Team Members:

Nishant Naravarajula (Nish)

Avijit Singh (Vee)

Description:

NewsNode is a news discussion platform where users can share, discover, and discuss current events through article links and commentary. The platform uses a voting system and trending algorithms to surface the most important discussions, helping users quickly identify what matters most. NewsNode provides a dedicated space for serious news discussions where journalists can share original research and users can explore diverse perspectives on important issues.

The platform allows you to post upvote or downvote an article, comment , Search for trending posts based on upvotes and comments.This application also has a user registration and authentication page.

Tech stack :

HTML

CSS

JS

NODE.JS

MONGODB

EXPRESS.JS

MONGODB ATLAS (DATABASE)

RENDER (Deployment)

User Stories:

Story 1: Ahmed catches up on the news after work

Ahmed gets home at 7pm after a long day. He opens NewsNode and clicks on the Trending page. He selects "Today" to see what people have been talking about. The top post is about a new cybersecurity breach – it has 12 upvotes and 8 comments. Ahmed reads the commentary and skims through the comments to understand different perspectives. In 10 minutes, he's caught up on the day's biggest stories without reading a single full article.

Story 2: Casey shares her latest investigation

Casey just published an article about healthcare costs on her blog. She logs into NewsNode, clicks "Submit Post," pastes the article URL, writes her commentary explaining the key findings, and selects "Health" as the category. Her post appears on the homepage. Throughout the day, users upvote it and leave comments discussing her findings. By evening, her post is trending and reaching an audience that cares about serious journalism.

Story 3: Ahmed votes on posts he finds valuable

While browsing the homepage, Ahmed sees a well-researched post about election polls. He clicks the upvote button to push it higher in the feed. He also sees a clickbait post with misleading information and downvotes it. His votes help the community surface quality content and bury low-effort posts.

Story 4: Casey engages in a discussion

Casey notices someone commented on her healthcare post with a thoughtful counterargument. She clicks into the post detail page, reads all the comments, and types a reply explaining her data sources. The discussion thread grows as more users join in, creating a meaningful dialogue about the issue.

Story 5: Ahmed filters by his interests

Ahmed is a tech enthusiast. He clicks the "Tech" category button on the homepage. The feed filters to show only technology-related posts — AI breakthroughs, cybersecurity news, startup funding. He ignores politics and health for now and focuses on what interests him most.

Story 6: Casey catches up after a week away

Casey was on vacation for a week. She opens the Trending page and selects "This Week" to see what she missed. The page shows the most upvoted and discussed posts from the past 7 days, ranked by popularity. She quickly identifies the 5 biggest stories and reads through the discussions to understand what happened while she was away.

Story 7: Ahmed creates an account

Ahmed wants to participate in discussions. He clicks the register link, fills in his name, picks the username "ahmed_reads", enters his email and password, and submits. He's

redirected to the login page, enters his credentials, and gets access. Now he can upvote posts, leave comments, and submit his own article links.

Story 8: Ahmed searches for a specific topic

Ahmed remembers reading a post about quantum computing but can't find it in the feed. He types "quantum" in the search bar and hits enter. The results show all posts with "quantum" in the title or content. He finds the post he was looking for and clicks into it.

User Personas:

Persona 1: Tired Office Worker Ahmed

- **Age:** 32
- **Occupation:** Marketing Manager
- **Goals:** Needs to quickly catch up on important news without reading full articles. Wants to see trending topics and community sentiment at a glance with limited time after work.
- **Pain Points:** Overwhelmed by too many news sources. Doesn't have time to read every article. Wants a quick way to see what matters and what people think about it.
- **How NewsNode Helps:** The trending page with time-based filters (today/week/month) lets Ahmed quickly see the most discussed topics. Vote counts show community sentiment at a glance. Category filters let him focus on topics he cares about.

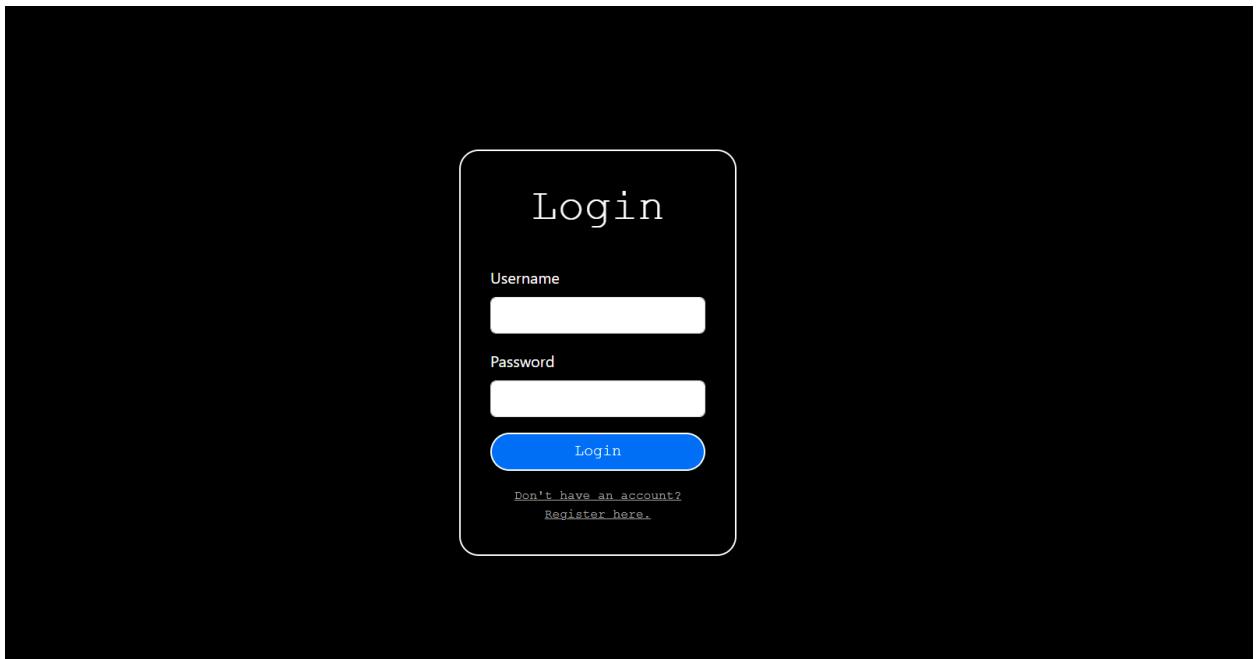
Persona 2: Independent Journalist Casey

- **Age:** 28
- **Occupation:** Freelance Journalist
- **Goals:** Needs to share original research and independent perspectives with an engaged audience interested in serious journalism and meaningful discussion.
- **Pain Points:** Mainstream platforms bury independent content. Hard to find an audience that wants in-depth discussion rather than quick reactions.
- **How NewsNode Helps:** Casey can post article links with detailed commentary. The voting system surfaces quality content.

Design Mockups:

The image shows a dark mode design for a news application. On the left, a sidebar contains the title "News Node" and navigation links: "Profile Name", "Home", "Recent", and "Trending". At the bottom of the sidebar is a copyright notice: "© 2026 News Node • MIT License". The main content area features a news article by "aweafery" from 2/19/2026. The article title is "New cybersecurity threat targets major corporations" (with a "Tech" tag). Below the title is a snippet: "This is a discussion about: government unveils new education funding plan. What are your thoughts on this topic?". A "Read Article →" button is present. Below the article are two circular icons with numbers (0) and a "Leave a Comment" section with a text input field and a "Post Comment" button. The total number of comments is listed as "Comments (0)".

The image shows a light mode design for a news application. The layout is similar to the dark mode version, with a sidebar containing "NewsNode", "Profile Name", and a highlighted "Home" link. The sidebar also includes "Recent" and "Trending" links, along with the "© 2026 News Node • MIT License" notice. The main content area displays a news article by "aweafery" from 2/19/2026. The article title is "New cybersecurity threat targets major corporations" (with a "Tech" tag). The snippet is identical to the dark mode version. Below the article are two circular icons with numbers (0), and a "Leave a Comment" section with a search bar, a "Post Comment" button, and a "Comments (0)" count. A second news item by "mrussanc" is partially visible below it.



News Node

Profile Name

Home

Recent

Trending

Trending

Today This Week This Month

No trending posts for this period.

© 2026 News Node • [MIT License](#)