

Techunity | Final Report

Abstract

Introduction

Motivation & Problem Statement

Existing social media platforms don't work well for tech professionals. They're filled with irrelevant content that makes it hard to find useful technical information, share code, or connect with other developers. Tech professionals need a dedicated space where they can focus on what matters to them: coding, learning new technologies, and building meaningful professional relationships.

Objectives

It empowers coders to **connect, collaborate, and grow** by sharing posts, completing challenges, showcasing code, and contributing to developer-centric conversations.

Technology Stack

Frontend:

- **React.js** – Component-based UI development
- **Tailwind CSS** – Utility-first styling for rapid, responsive design
- **React Query** – Data fetching, caching, and synchronization

Backend:

- **Appwrite** – Backend-as-a-service (BaaS) for authentication, databases, file storage, and functions

Other Libraries:

- **TypeScript** – Type-safe development
- **ShadCN UI** – Pre-built accessible UI components
- **React Router** – Page routing and nested layouts

Features

Authentication & Profiles

- Sign-up and sign-in via email/password.
- Editable user profiles with avatars and bios.

Post System

- Create, edit, and delete posts with image uploads.
- Tags, captions, locations.
- Like and save posts.
- Infinite scroll on feed.

Social Graph

- View other users.
- Follow and explore posts by peers.

Storage & Media

- Secure file upload and preview via Appwrite Storage.
- Proper cleanup of unused files on post/user updates.

Advanced Filtering

- Search posts by caption.
- Sort by recency or popularity (likes).

Following System

- Users can easily follow or unfollow other tech professionals with a simple click, building their professional network.
- A dedicated "People" section where users can browse and discover other members of the tech community.
- Follow buttons are seamlessly integrated throughout the platform, appearing on user profiles and user cards for easy access.

Programmers Interaction

- A dedicated space for users to interact, discuss, and engage with other tech professionals.

Enhancing Coding Abilities

- Structured coding problems and challenges that help developers sharpen their problem-solving skills.
- Leetcode-like.

System Architecture

Development Process

Testing

Future Work & Discussion
