

## Social Feed App (Cloudy Social) - Technical Overview

Github: <https://github.com/itstanany/Cloudy-Social>

--- Review GitHub readme for better docs and screenshots

### # Architecture & Design Patterns

The application implements MVC with BLoC pattern, chosen for:

- Clear separation of concerns
- Predictable state management
- Improved testability
- Efficient UI updates

### # Key Technical Decisions

#### \* State Management

- BLoC pattern for complex state handling
- Event-driven architecture

#### \* Routing:

- GoRouter

#### \* Data Layer

- Floor (SQLite) for type-safe database operations
- Local image storage for performance
- Cached network images for efficient loading

#### \* UI/UX Features

- Animated like interactions
- Error state management

### # Post Sorting Algorithm

Three distinct algorithms implemented:

Recent: chronological ordering

Popular: likes-based ranking

Trending:  $\text{score} = (\text{likes} \times 1.0) \times (1.0 / (1 + \text{hoursSincePost}) \times 2.0)$

#### \* Performance Optimizations

- Image compression
- Efficient list rendering
- Resource cleanup
- State caching

#### \* Security Measures

- Password hashing
- Input validation