Skylark Labs - Full Stack Engineer Coding Test

Project: RTSP Stream Viewer

Overview

Build a simple web application that allows users to add RTSP stream URLs and view the live streams in a browser. The application should be hosted on GitHub Pages or similar service.

Required Deliverables

- GitHub repository with complete source code
- Live demo hosted on GitHub Pages or similar platform
- README with setup instructions

Technical Requirements

1. Frontend

- Create a clean, responsive web interface with:
    - Input field to add RTSP stream URLs
    - Display area for the live stream(s)
    - Option to view multiple streams simultaneously in a grid layout
    - Basic stream controls (play/pause)
- Use React.js for the frontend implementation

2. Backend

- Create a Django backend that:
    - Accepts RTSP stream URLs
    - Processes video streams using FFmpeg
    - Streams video to frontend using Django Channels (WebSockets)
    - Handles connection errors gracefully

3. Deployment

- Host the frontend on GitHub Pages or similar service
- Deploy the backend on a platform of your choice (Heroku, Vercel, etc.)
- Provide clear instructions for running the application locally

Evaluation Criteria

- Functionality: Streams display properly and smoothly

- Code quality and organization
- Error handling
- UI/UX design
- Performance with multiple streams

Test RTSP Streams

For testing purposes, you can use these public RTSP streams:

- rtsp://admin:admin123@49.248.155.178:555/cam/realmonitor?channel=1&subtype=0

Submission Instructions

1. Send us the GitHub repository URL
2. Provide the URL to the live demo
3. Include any credentials needed to access the application (if applicable)
4. Timeline 7 days from the receipt of this test

Good luck!