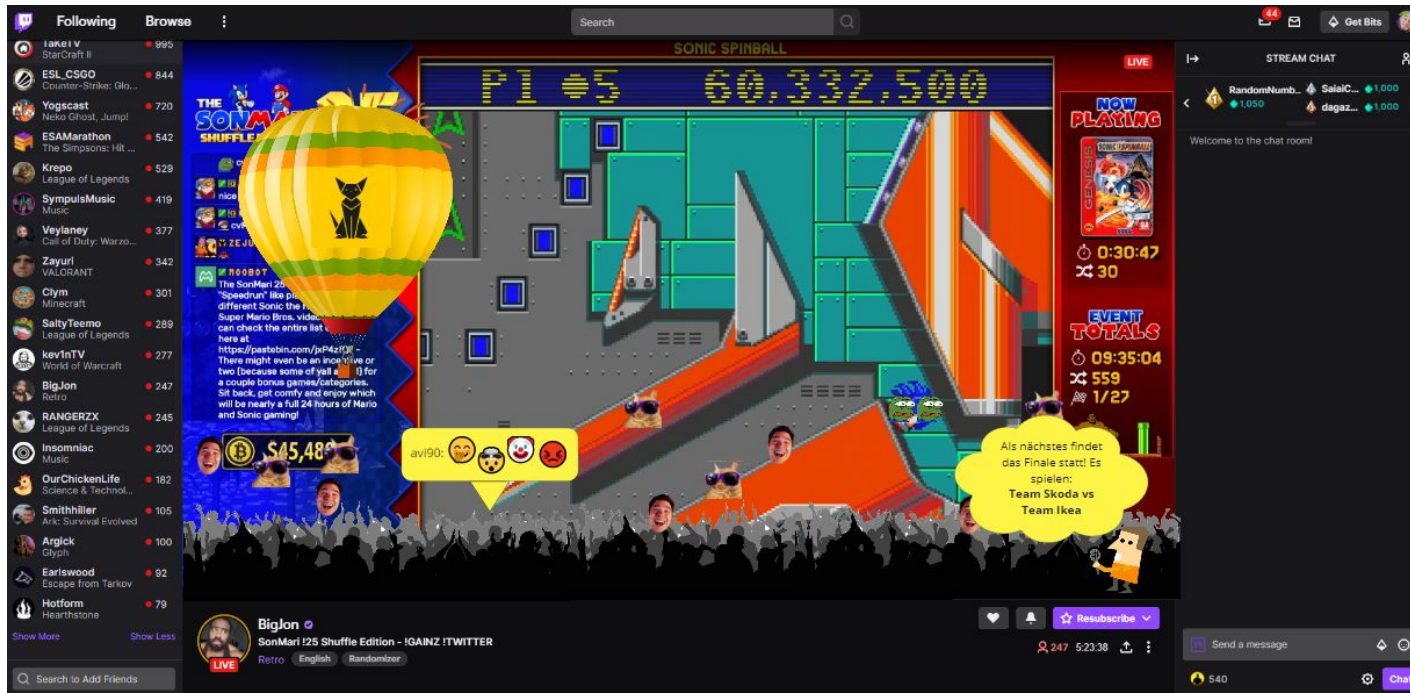




# Cat Crowd Party

Interactive crowd-based stream-overlay





Cat Crowd Party is a crowd-sourced, interactive overlay for streams as well as local viewing at an event. The focus is to interconnect the on- and offline crowd, base screen activity on atmosphere and allow for interactions with the stream.



# Core Features

- **Cheering Crowd:**  
Dancing, partying and jumping crowd, triggered by and based on cheering intensity offline at the event as well as chat activity.
- **Triggerable Effects:**  
Hot-air balloons and speech bubbles filled with emotes can be triggered by the stream chat.
- **Stream-Announcements:**  
Moderators can send messages, scores or announcement directly to the stream overlay.





## Moderator

☐ Show Bubble

Message

Als nächstes findet das Finale statt! Es spielen: Team Skoda vs Team Ikea

## Display

☐ Hide Everything

## Animation Intensity



## Animation

Dance

Jump

Party

Claps

Lude Air Ballon





## Cat Crowd Party - Control Panel

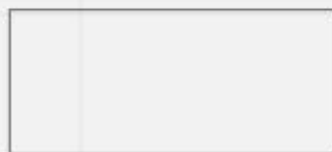
### Crowd Control

Idle

Clap

Chase Chase

### Moderator



### Layers

- ☐ Ballon
- ☐ Emotes
- ☐ Speech Bubble
- ☐ Moderator

### Animation

LudeCat Air Ballon

Fritz Cola Air Ballon

FH Air Ballon



# Stage 01 - “Encapsulated Kitty”

- Overlay for offline and online screen
- Web-based HTML5 application
- Control panel
- Idle (loop) animation crowd visualization
  - Directed by control panel
  - Three animation stages (Idle, Clapping, Cheer)
- Manual triggers
  - Announcer with message (show+hide)
  - Animated LudeCat air balloon (moves from left to right)
- Control Panel Layer system
  - Disable enable visibility: Ballon, Announcer, Speech Bubble, Crowd, Emotes



## Stage 02 - “Chat Crowd Kitty”

- Include online crowd
- Read twitch chat message stream
  - Show random emote speech bubble with a cooldown of 5 seconds with max 3 concurrent bubbles activate with a cap of 30 message every 100s (then queue resets)
  - Display emotes
    - Generic fade-out animation for emotes (bottom to top)
  - Chat commands LudeCat ballon trigger
- Read offline crowd mood
  - The volume (db) has impact on crowd intensity level (+/-)



## Stage 03 - “Cat Crowd Party”



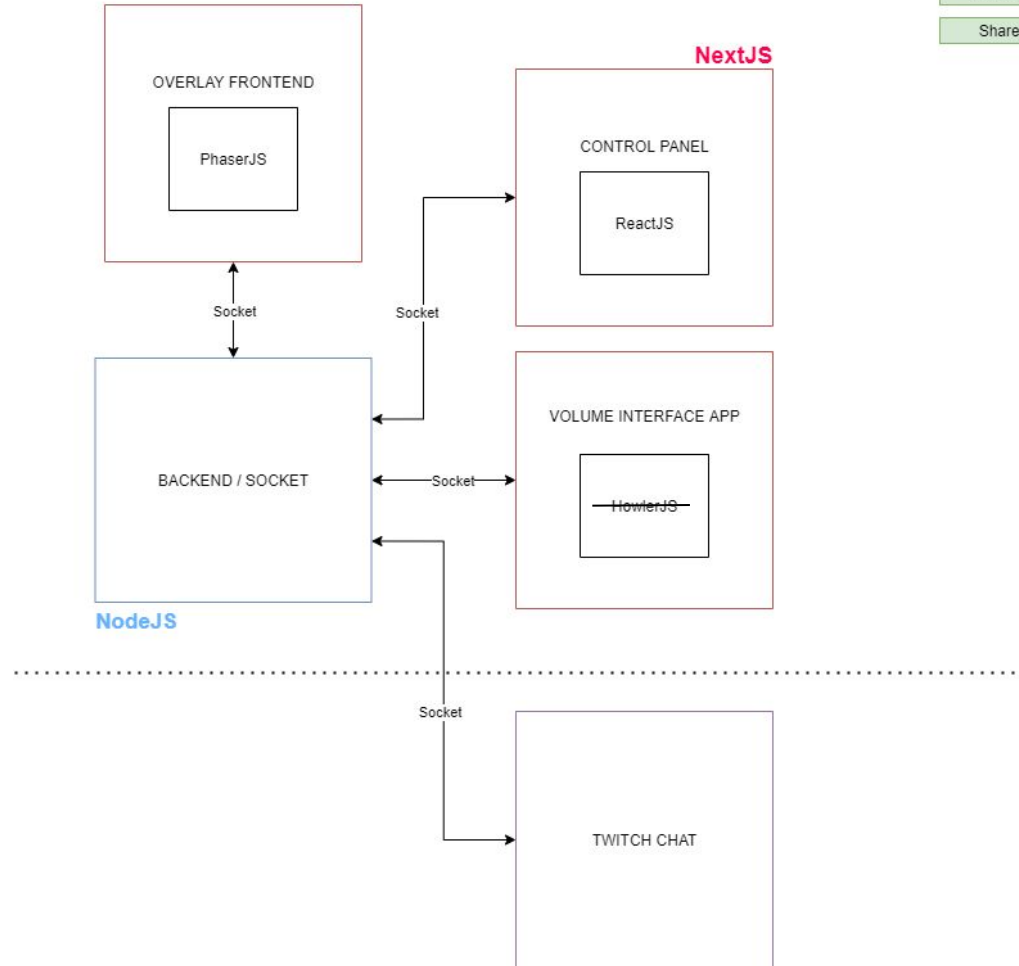
- Emotes have a animation variations
  - PJSalt flies in an arc and rotates
  - CoolCat jumps and bounces like a rabbit in front of the crowd
  - Popcorn scales up and goes up and down from the front
  - BibleThump, FrankerZ, Poggers, Kappa, ... (emotions as emotes)
- Air Ballons have multiple variations
  - Shows sponsor logo (e.g. Fritz-Cola Ballon, FH Ballon ...)
  - When triggered by a viewer it takes the color of the user
  - Animated fire-fuel animation (going up and down from left to right)
  - Display Team-Tag and/or Teamlogo
- Animated announcer



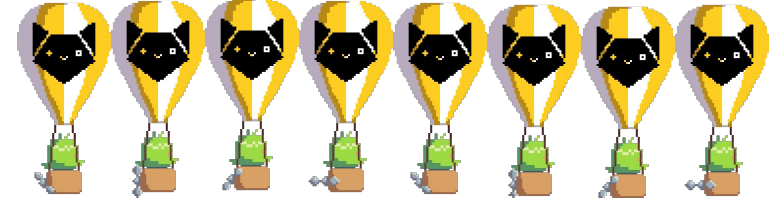


# Tech Stack & Flow Chart

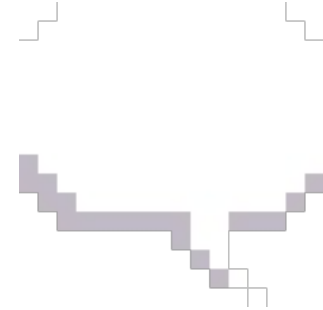
- NPM Workspaces
- Frontend, Backend, Shared
- TypeScript
- SocketIO
- NodeJS
- NextJS
- ~~HowlerJS~~ — HTML5 WebAudio
- PhaserJS



# Asset List



- 2D Transparent Sprite Sheet .PNGs with consistent height, width per frame optimized for FullHD
- Animated Crowd Sprite Sheet
  - Three different animations (Idle, Clap, Party) → increased intensity
  - Single Person variations
  - Crowd Concept Design
- Animated Hot Air Balloon Sprite Sheet
  - LudeCat version
  - Up/Down Animation State (e.g. fire in the center to heat up)
  - Allows to develop more version of this (e.g. Fritz-Cola, FH Ballon)
- Animated Moderator
  - Speaking state
  - Static Speech Bubble Design
- Static Twitch Bubble Design



# Development Team

Lead & Dev: Patrick

Dev: David

Artist: Mira

Supporter: Nessi

Supporter: Hannah

Supporter: Flo



# Learnings

- Web Audio is powerful but has its constraints
  - Audio permissions required, recording while tab is inactive
- Phaser is the best 2D HTML framework
- A staged development plan helps a lot
- Adaptations on the fly are totally ok
- Quality and Overengineering is still one of the hardest things to decide to
- NPM workspaces works out of the box and does the job for small project
- Toolchain in web can eat a lot of time (focus on what is needed)



# Stage 04 - “Beyond the Cat Bowl”

- Sound
- Stadion
- 3D
- Credits / LudeCoins
- Blockchain
- AI / ML
- NFC
- Season pass
- Mixed Reality
- Discord Integration
- Alles

