

Capstone Project

Project Goals

- Deepen your learning about material we have studied
- Learn to work as a team in a longer time frame
- Have a great project to talk about with employers
- Solve difficult problems
- Talk to users that you can get (other developers)
- Explore new technologies*
- Focus on design*

Project "Anti"-Goals

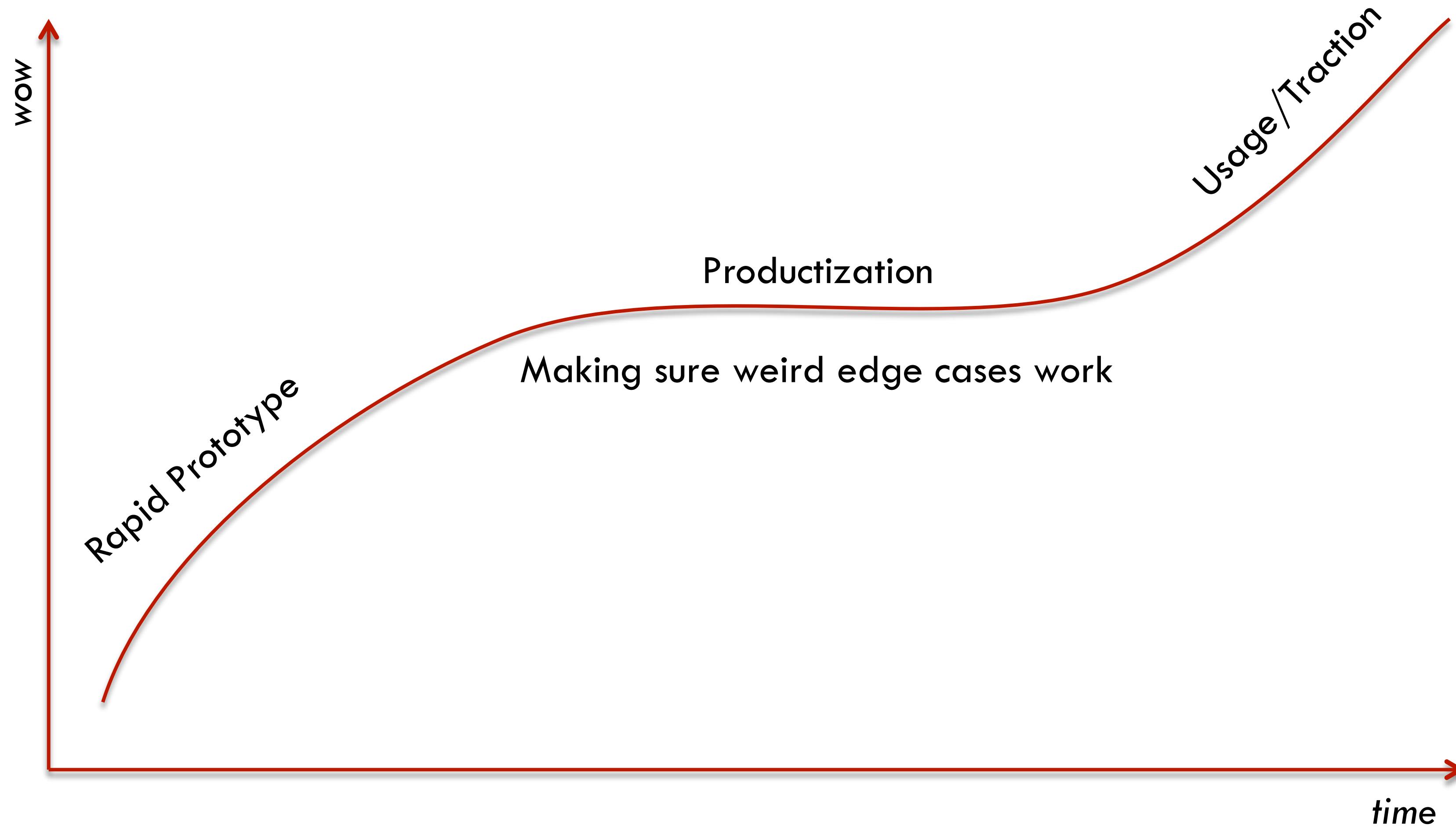
- **Launch a Startup / Make Money**
- **Learn shallowly in a different ecosystem**
- **Use stuff where we can't really help you if you get stuck**
- **Explore new technologies***
- **Focus on design***

Project Meta-categories

- **Tools for developers**
- **Tools for people learning to code / education**
- **Tools for collaboration, communication, organization**
- **Real-time interactions**
- **Data Visualization**
- **Games**
 - (Card, Board, Physics Engines)
- **Chrome Extensions**
 - (Browsing Info, Modify Current Sites, Aggregate Information)



Wow Factor S-Curve





Project Ambition Matrix

	Low Ambition	High Ambition
Low Risk	<p>Single User Todo List CRUD Apps Connect two APIs</p>	<p>Usually "for the Web" For Developers</p>
High Risk	<p>Deploying a mobile app New Non-JS Stacks</p>	<p>3D Games Hardware VR / AR</p>

A close-up photograph of a large brown bear lying on its stomach on a weathered wooden log. The bear's head is resting on its front paws, which are propped up on the log. Its dark brown fur is visible, and it has a slightly grumpy expression. A large green speech bubble originates from the bear's mouth, containing the text.

**If we don't have a super
great capstone idea,
I will be a failure at life**

**What you do is not as
important as how you do it**

Project Ideas

- Any project type will have it's challenges
- Any project type can have fun and interesting things to do (as well as boring and time-consuming ones)
- You can work later on things that you find interesting yourself, even if they're not part of capstone

Project Ideas

- We will give you a repo full of “fallback” capstone ideas
- As a team, you can pick one of those, or come up with an alternative
 - ...which you have to defend to us!
- If you haven’t decided on an idea by Wednesday morning, you will go with a fallback

Project Idea Generation

- **Fallback ideas**

- <https://github.com/FullstackAcademy/default-capstone-ideas>

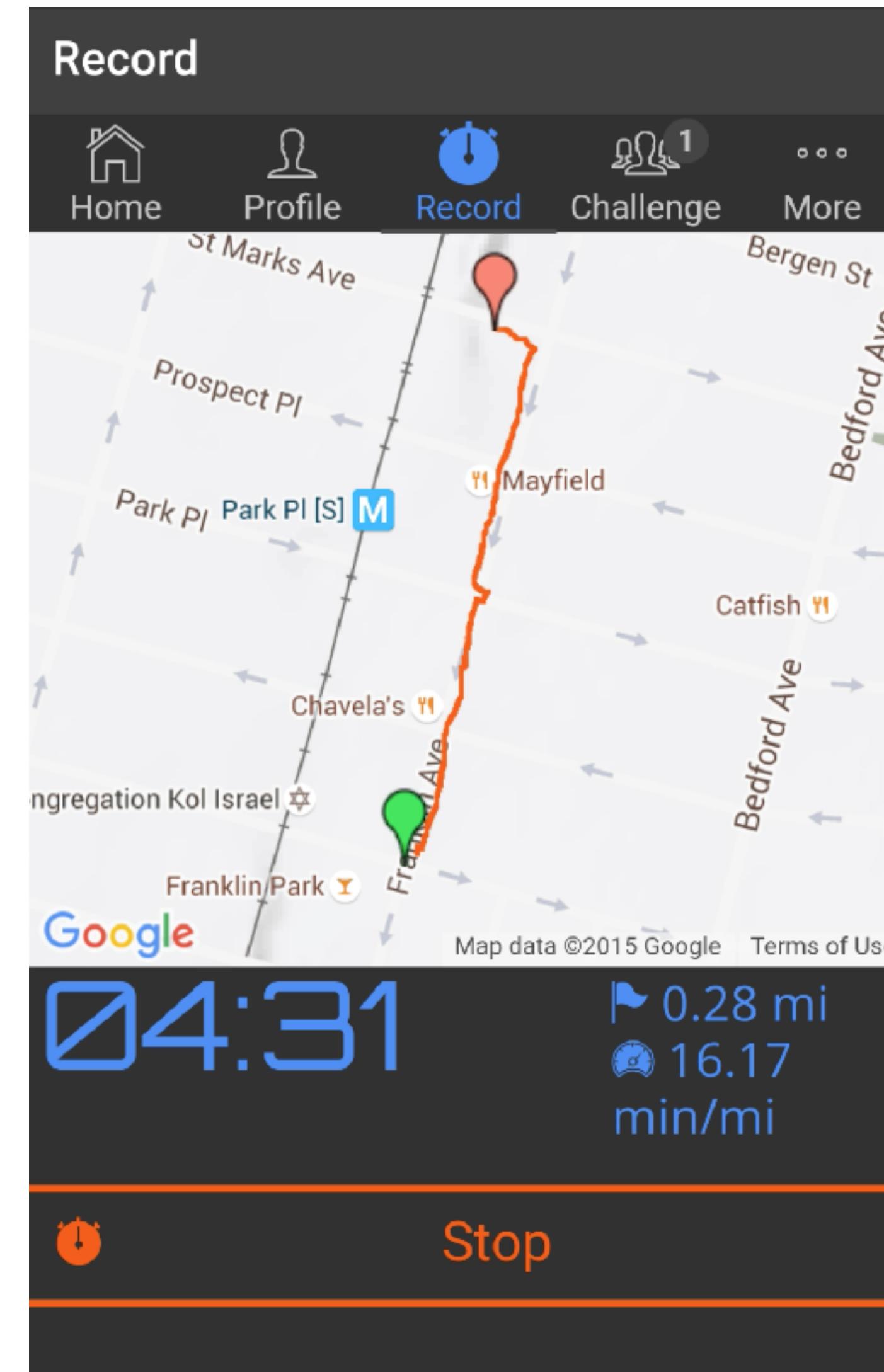
- **Others:**

- <https://www.fullstackacademy.com/student-gallery>
 - <http://bit.ly/fullstackideas>
 - <http://producthunt.com>
 - <http://www.ideamachine.io/>
 - Ask staff and fellows!

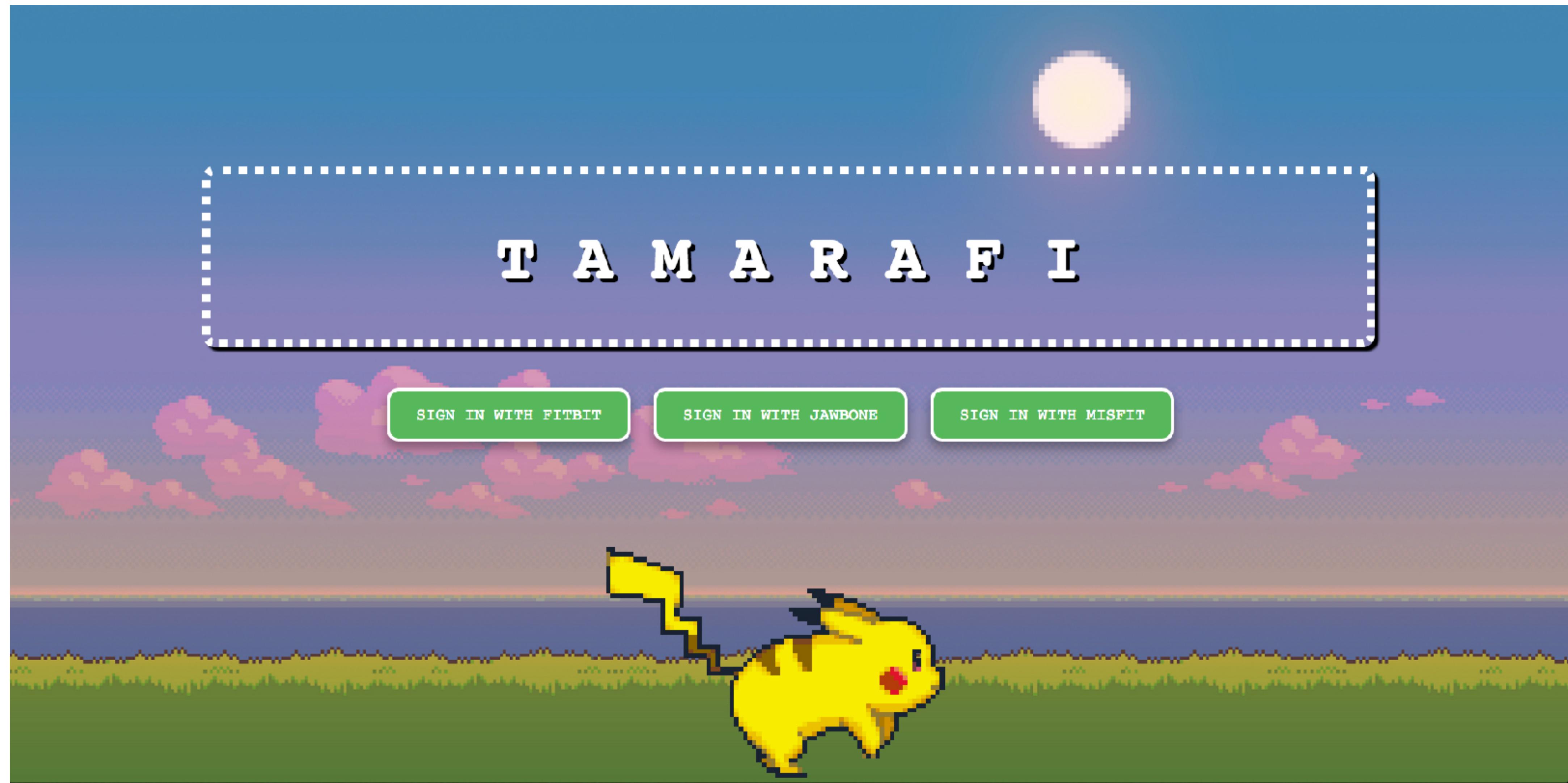
Project Ideas

- You'll get differing ideas from different people on the staff - there is no right answer on the perfect project!
- Don't optimize too hard for what employers like - if you don't get the space and aren't interested - that's going to come through more

Ghost Runner (1509)



Tamarafi (1511)



Grille (1509)

GRILLE ISSUE+

djdavidi/my-new-project

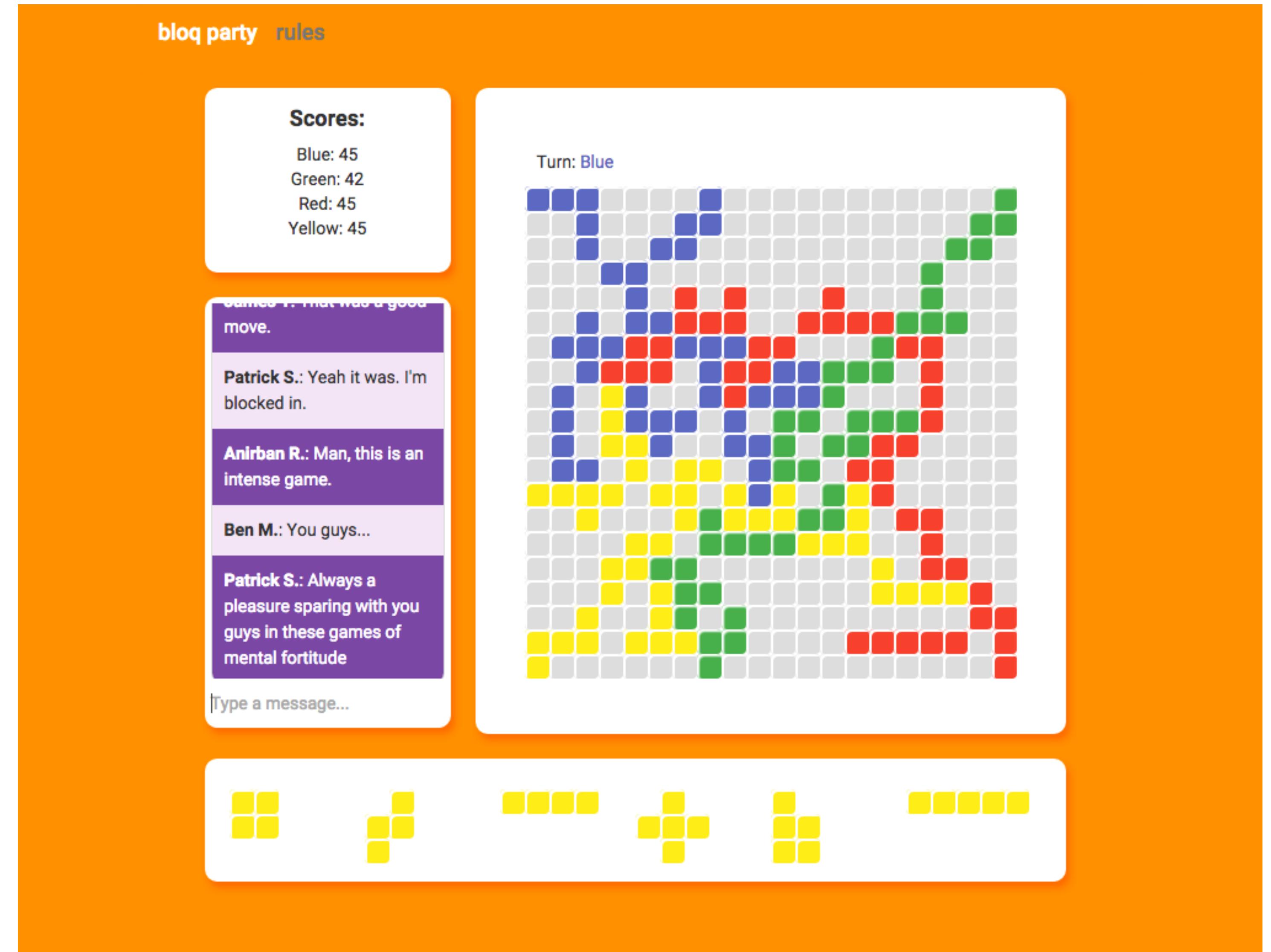
Backlog	Ready	Active	Done
6 Landing Page 	17 Add homepage to navbar 	19 Create new homepage 	13 User profile management
5 Get google Api keys for the map and 	16 My New Issue 1	14 New Issue 	11 Set up Grille repo
4 Create logo for the home page 	8 Testing coverage for user 1	20 Sprint: Finish Homepage 2	12 Followers
3 Create Data and Visualization page for 	15 I have a new problem we need to work 3	10 Sharing Routes 	9 Set up Github repo
2 Think of a new name for our project! 		7 Basic Express Routes 	
1 Create Database Schemas 		18 Add homepage to navbar 	

Dance Dance Evolution (1507)



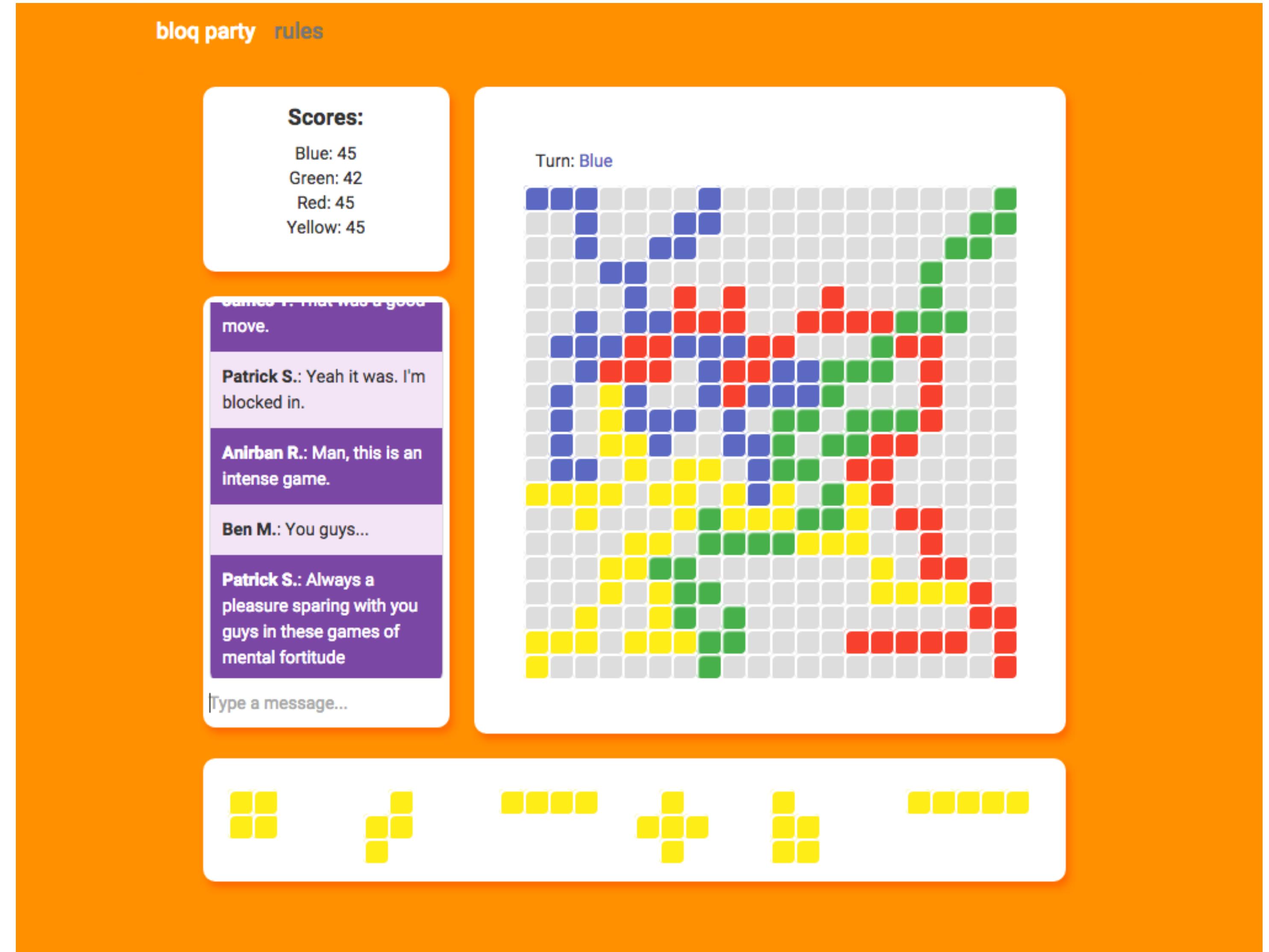
Bloq Party (1503)

- Digital implementation of a real-life idea



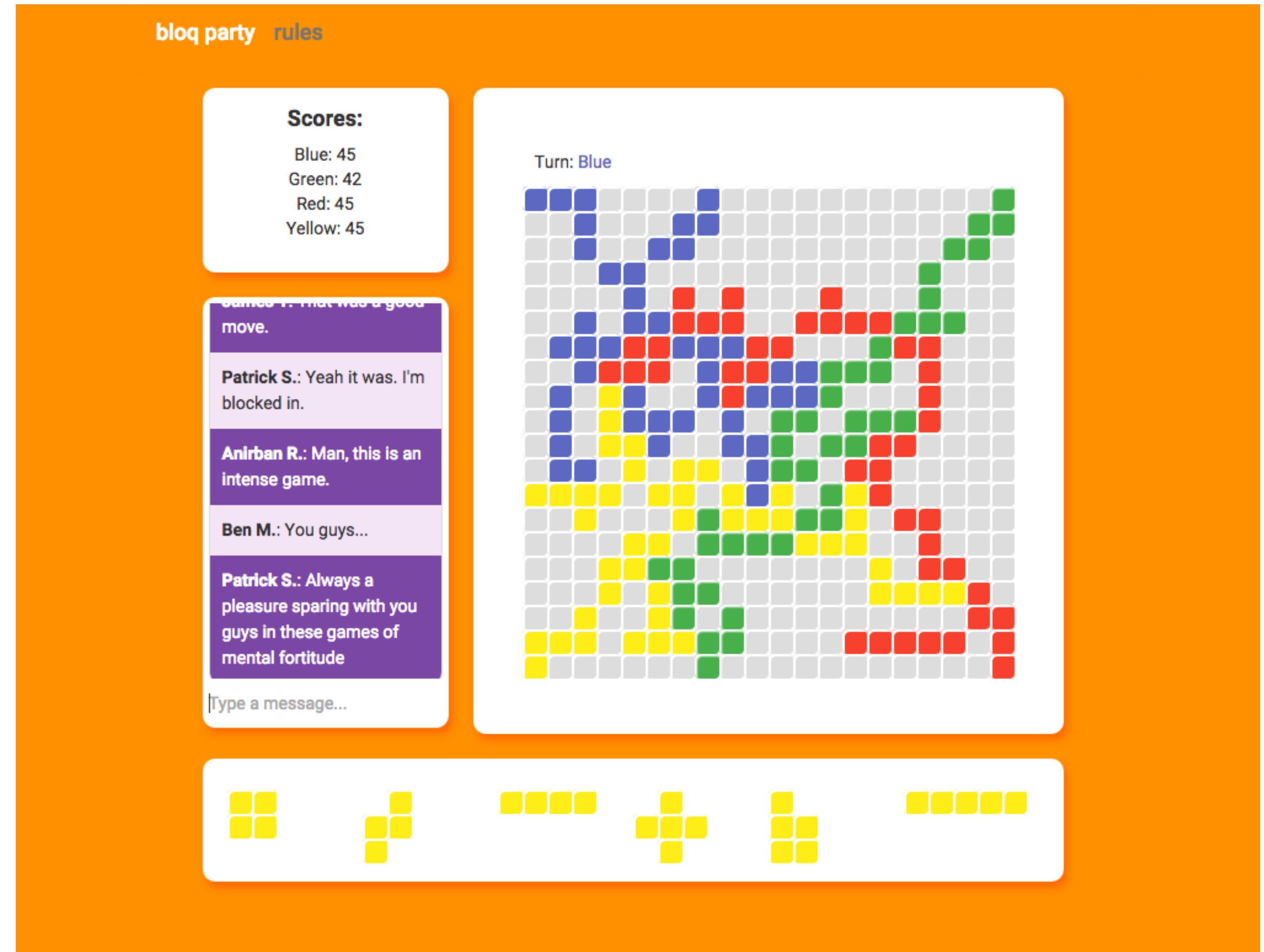
Bloq Party (1503)

- ➊ Digital implementation of a real-life idea
- ➋ Interesting problem set



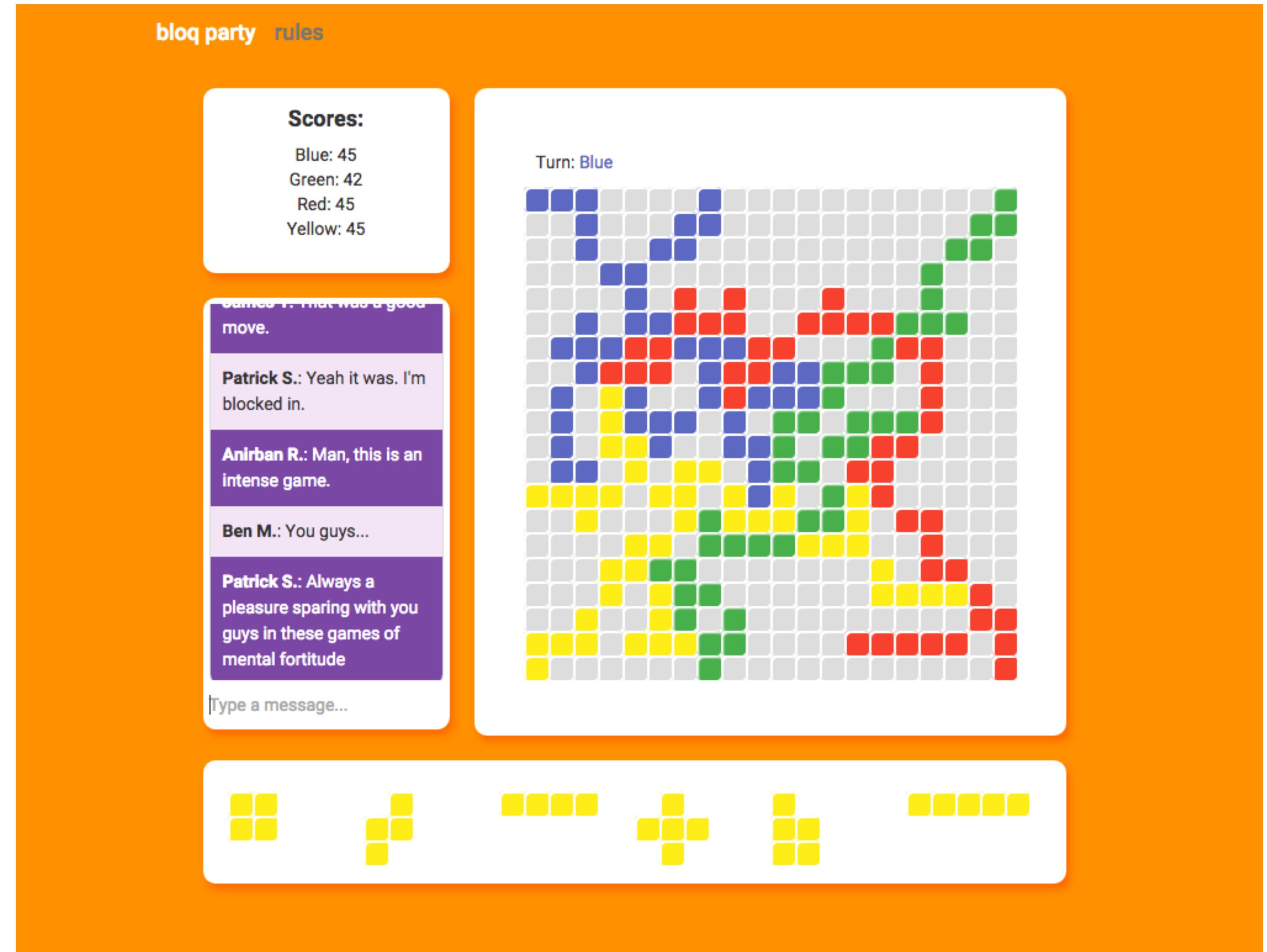
Bloq Party (1503)

- ➊ Digital implementation of a real-life idea
- ➋ Interesting problem set
- ➌ Computer player (variant AI)



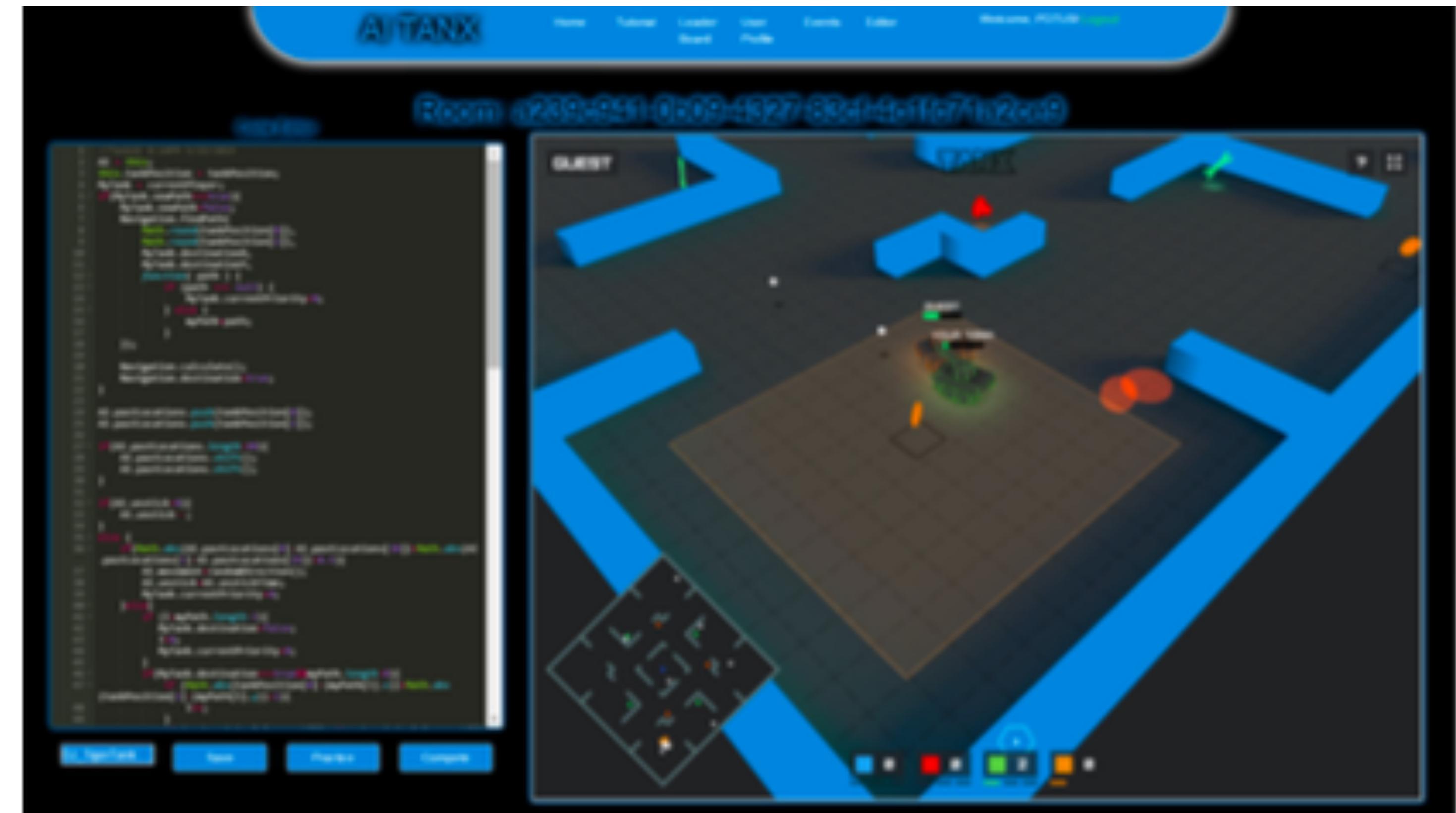
Bloq Party (1503)

- ➊ Digital implementation of a real-life idea
- ➋ Interesting problem set
- ➌ Computer player (variant AI)
- ➍ Small, digestable



A.I. Tanx (1503)

- Very ambitious



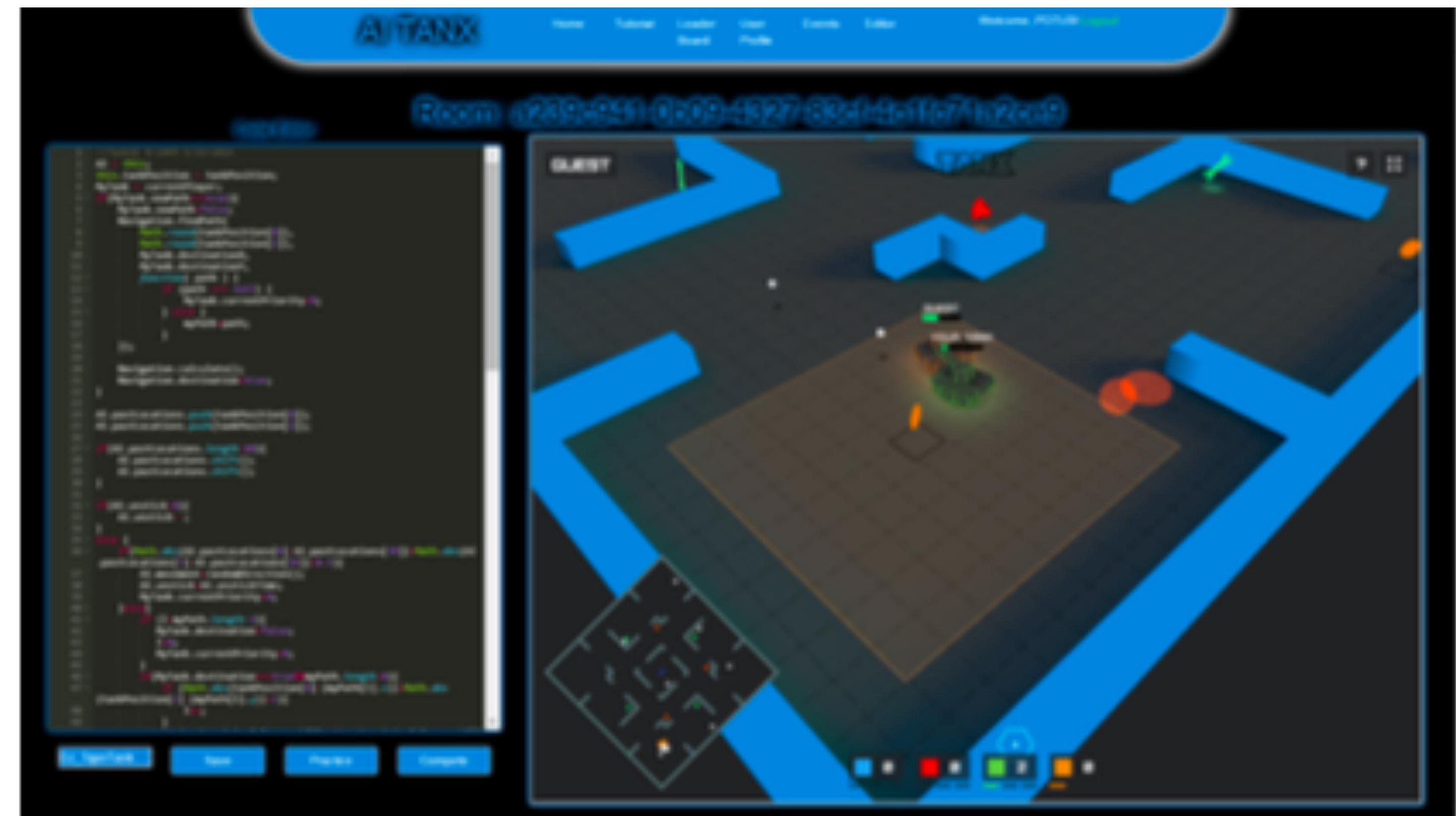
A.I. Tanx (1503)

- ➊ Very ambitious
- ➋ Hacking around a third-party service



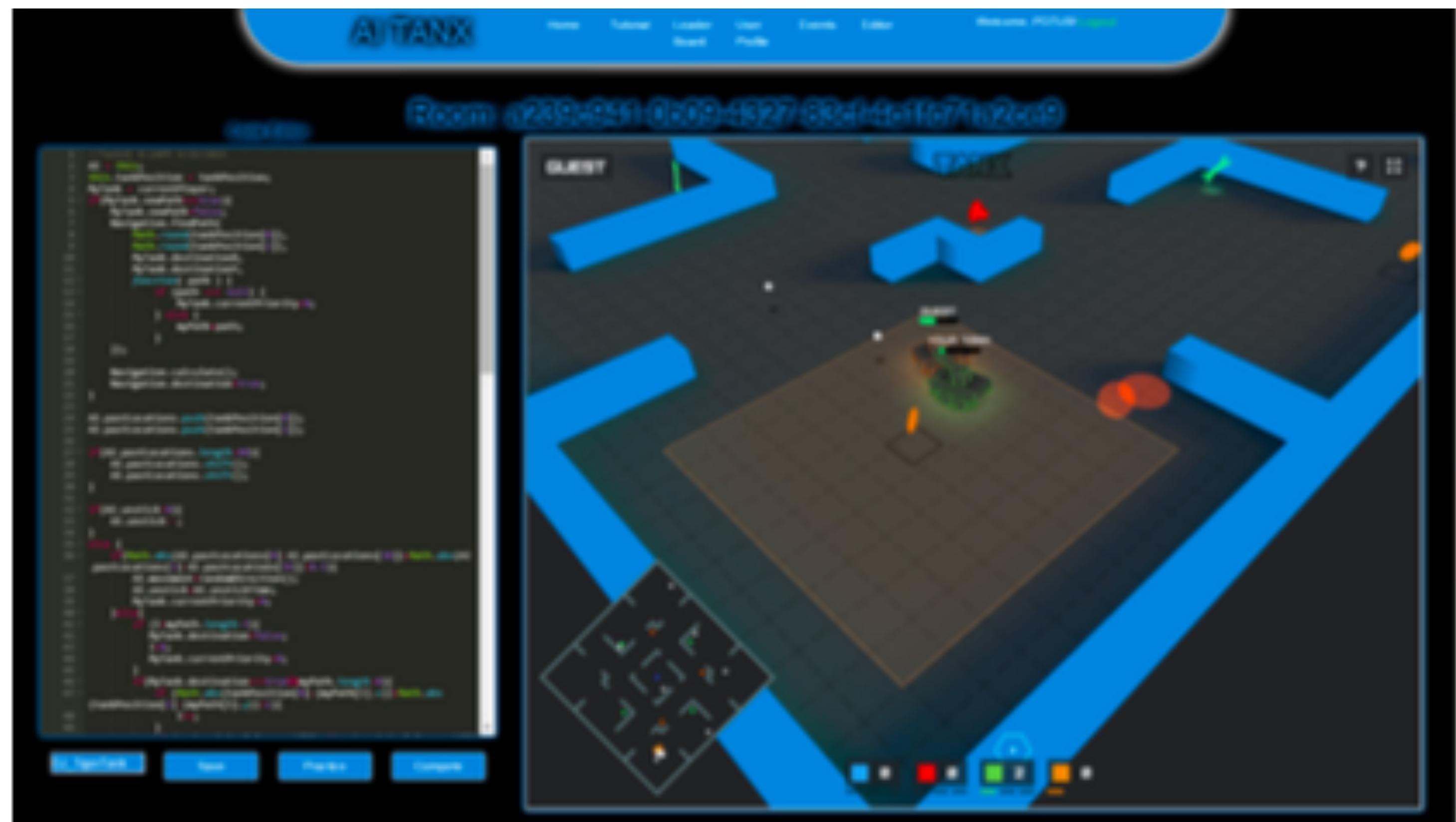
A.I. Tanx (1503)

- ➊ Very ambitious
- ➋ Hacking around a third-party service
- ➌ Meta!



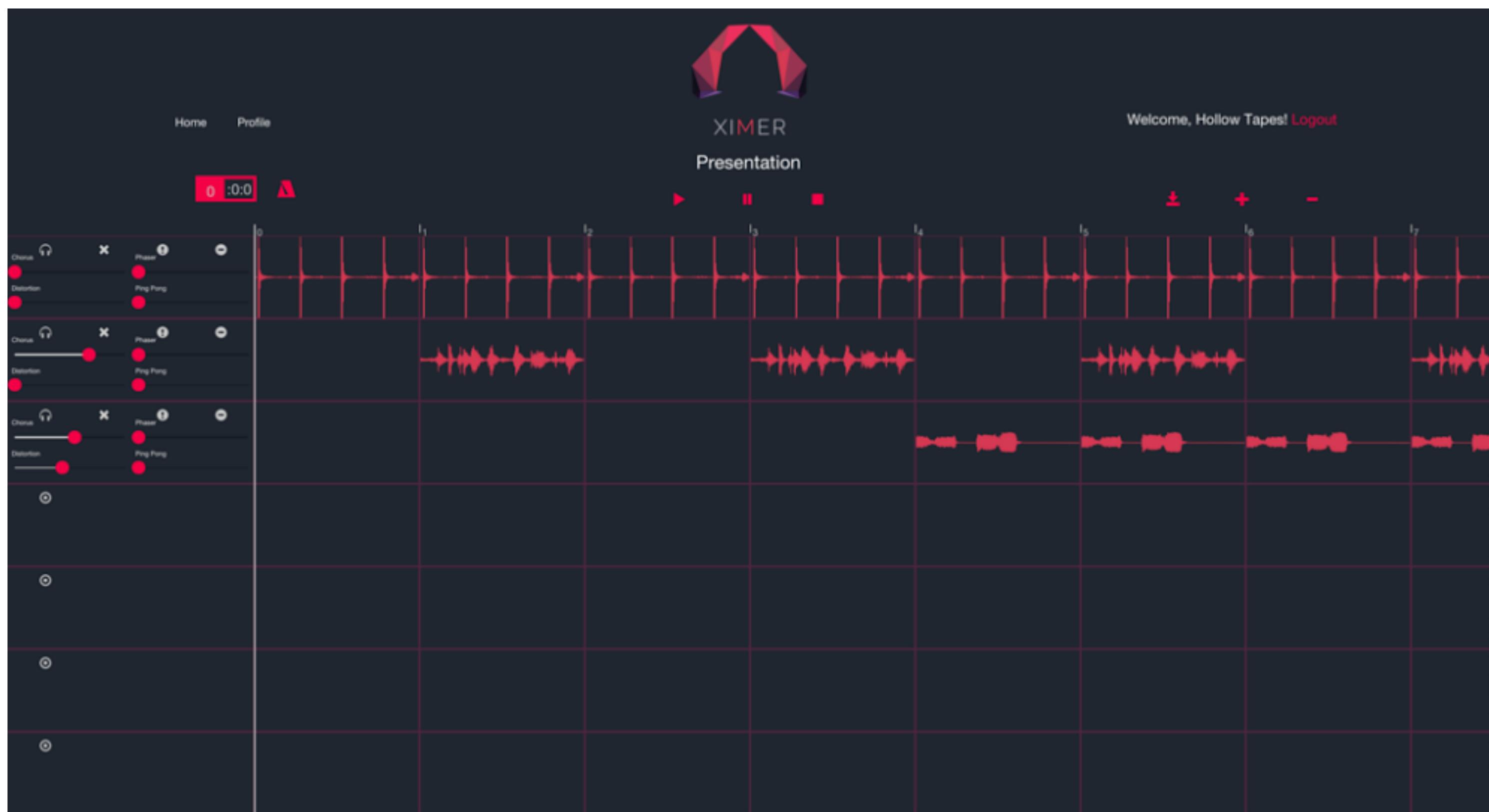
A.I. Tanx (1503)

- ➊ Very ambitious
- ➋ Hacking around a third-party service
- ➌ Meta!
- ➍ Built a code interface as an abstraction to another code interface



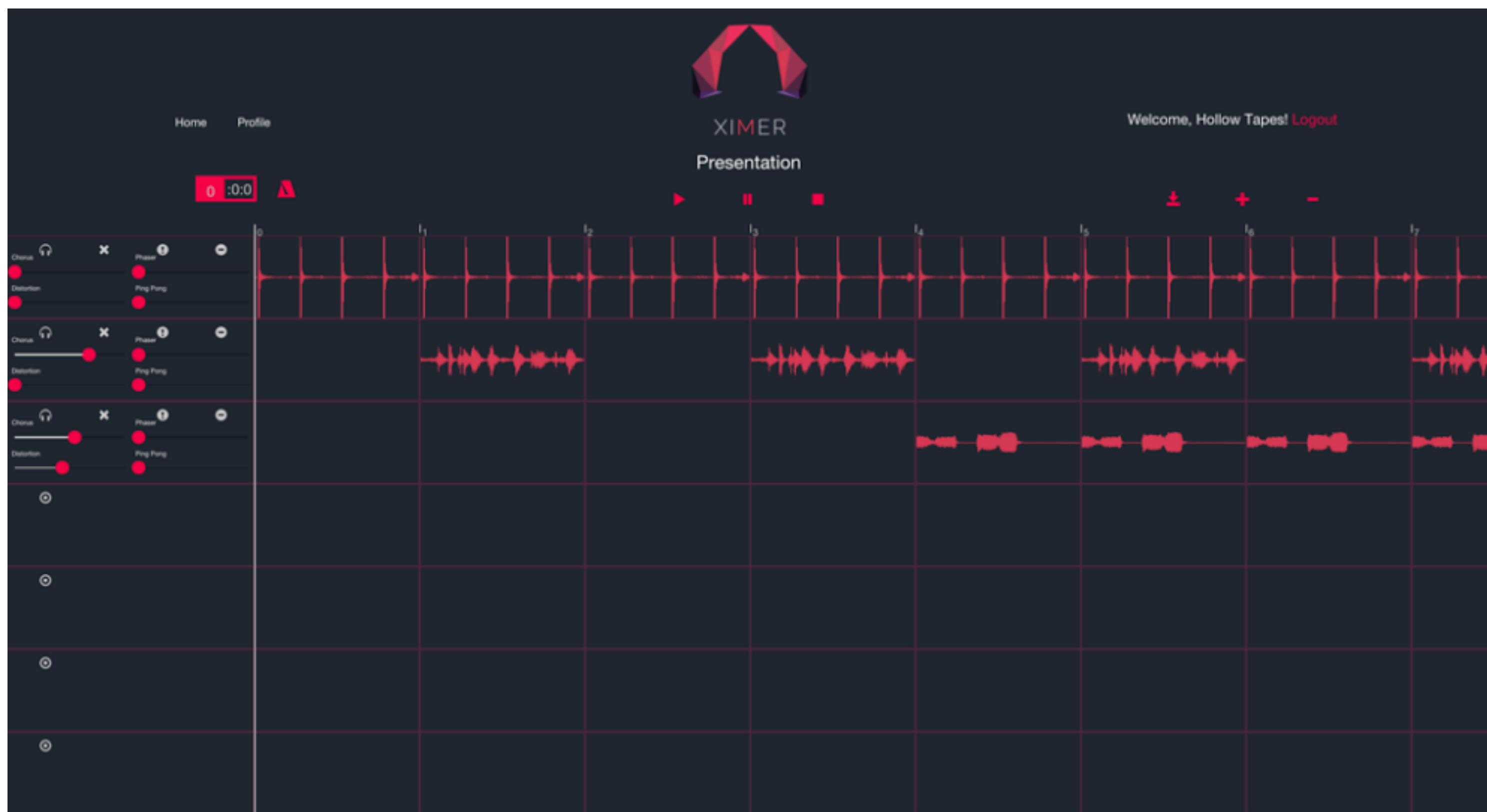
ximer (1504)

- Using bleeding edge technologies



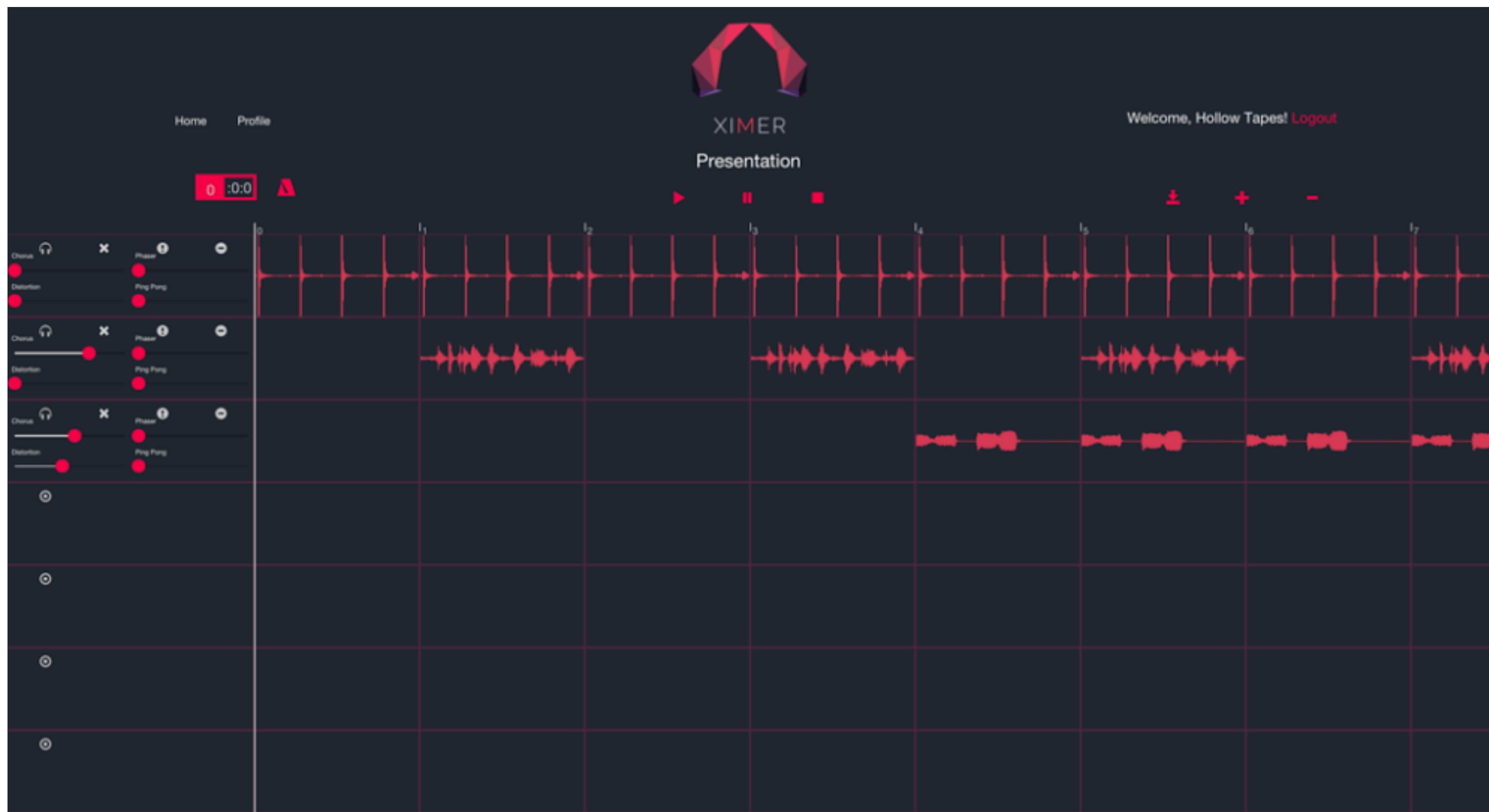
ximer (1504)

- ◎ Using bleeding edge technologies
- ◎ Diverse problem set



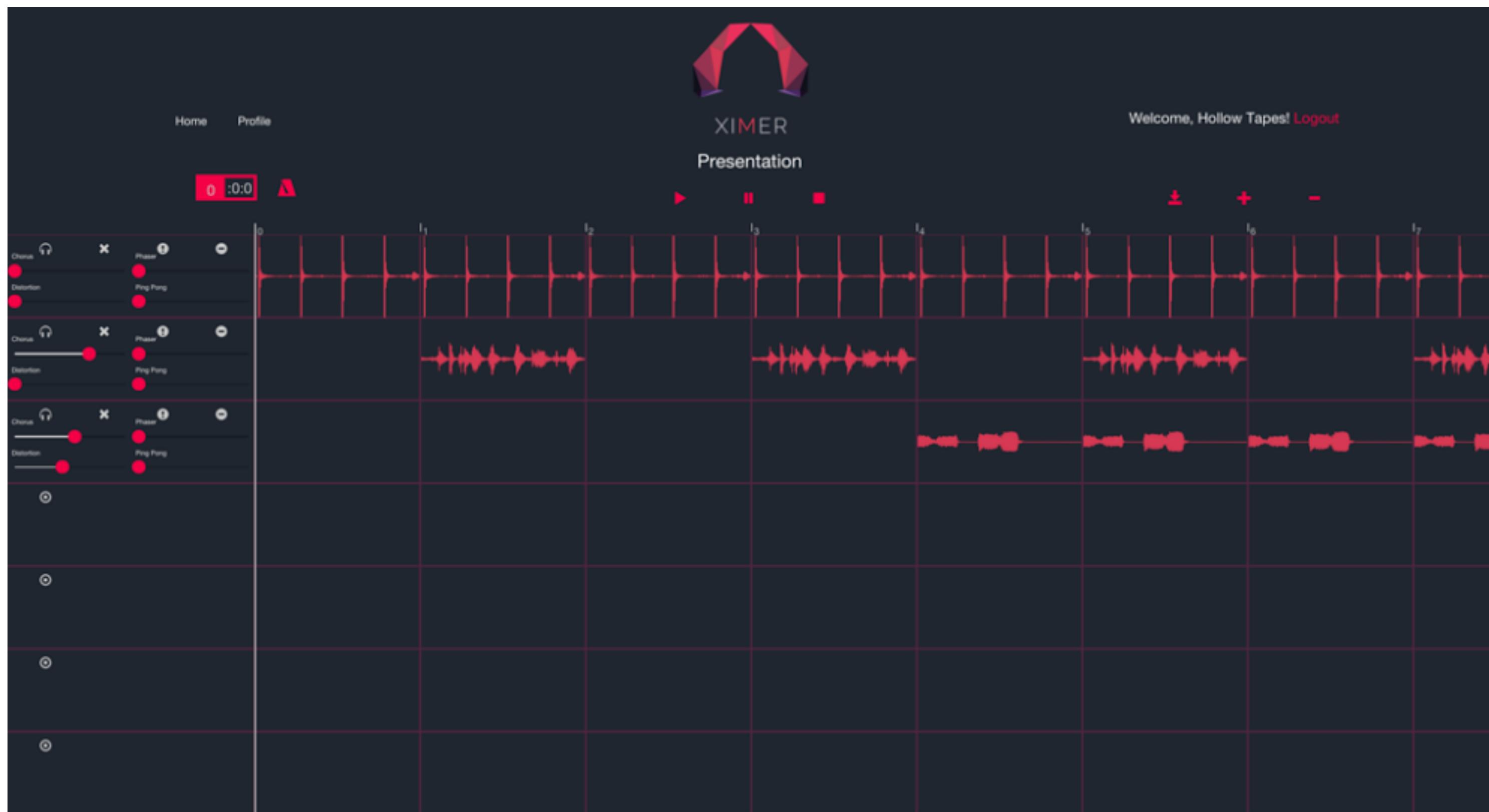
ximer (1504)

- Using bleeding edge technologies
- Diverse problem set
- Emphasizes the power of Javascript



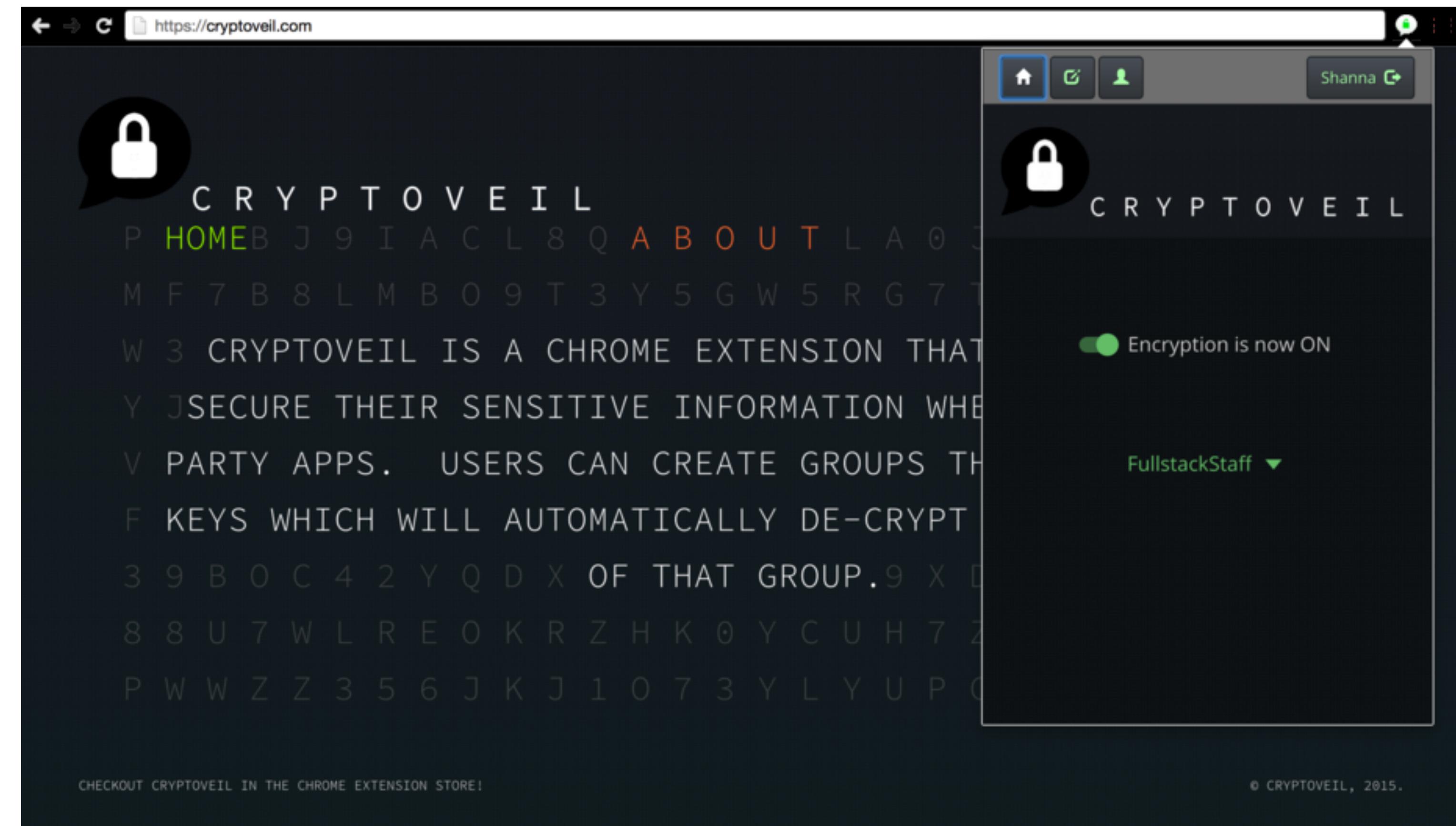
ximer (1504)

- Using bleeding edge technologies
- Diverse problem set
- Emphasizes the power of Javascript
- Demo'd very well



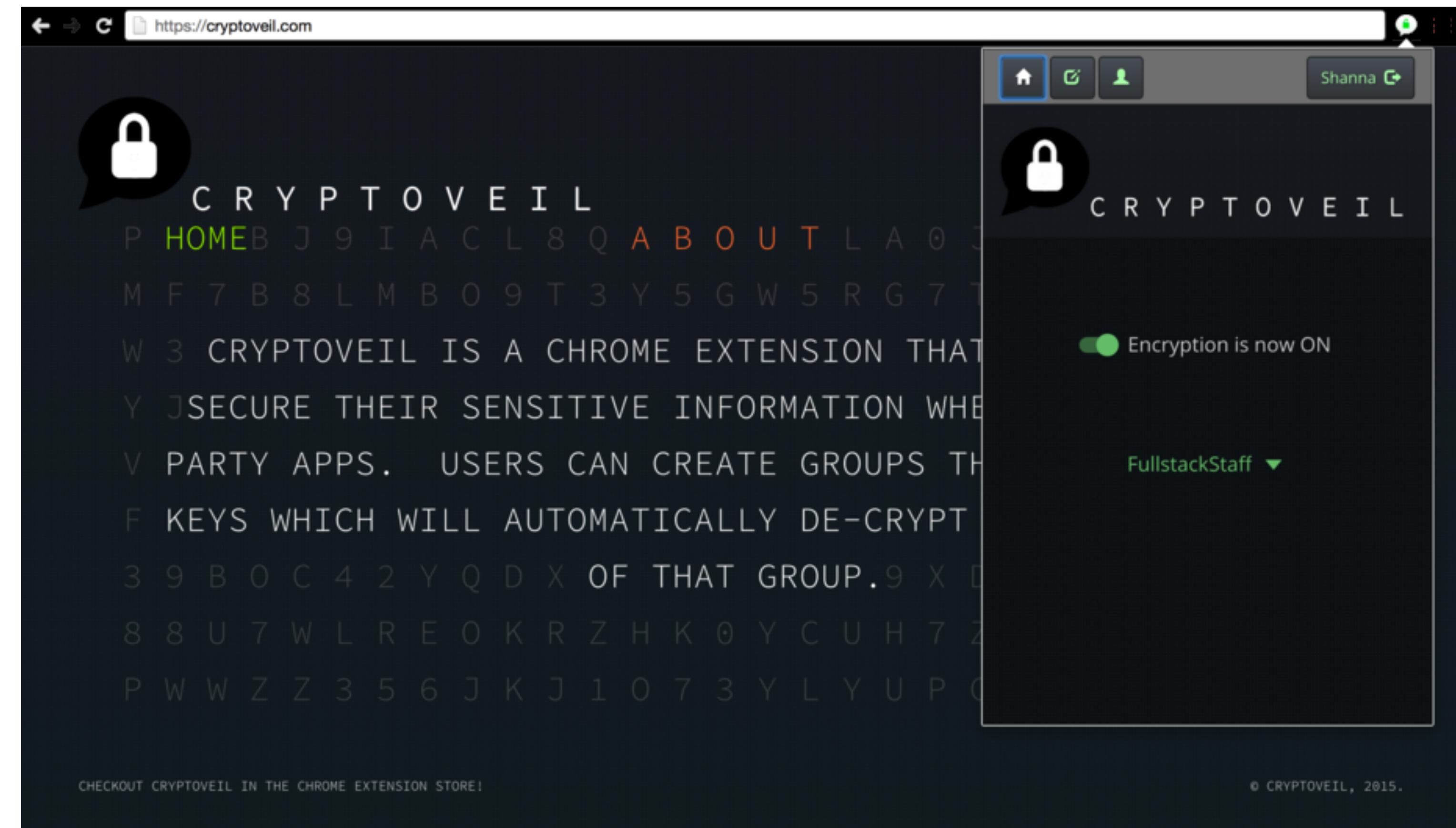
Cryptoveil (1504)

- Simple, relatable problem set



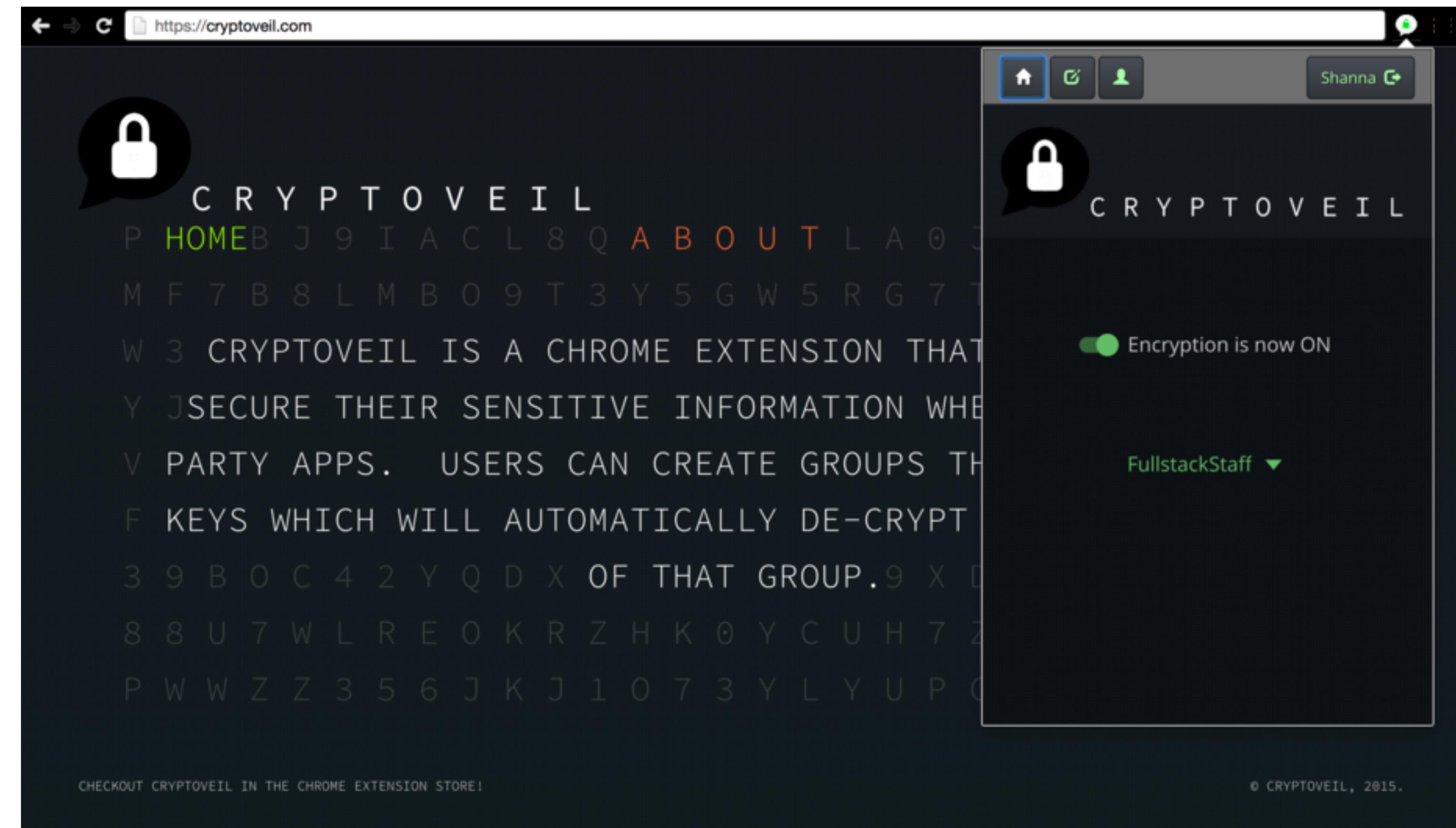
Cryptoveil (1504)

- Simple, relatable problem set
- Effective use of scaffolded design



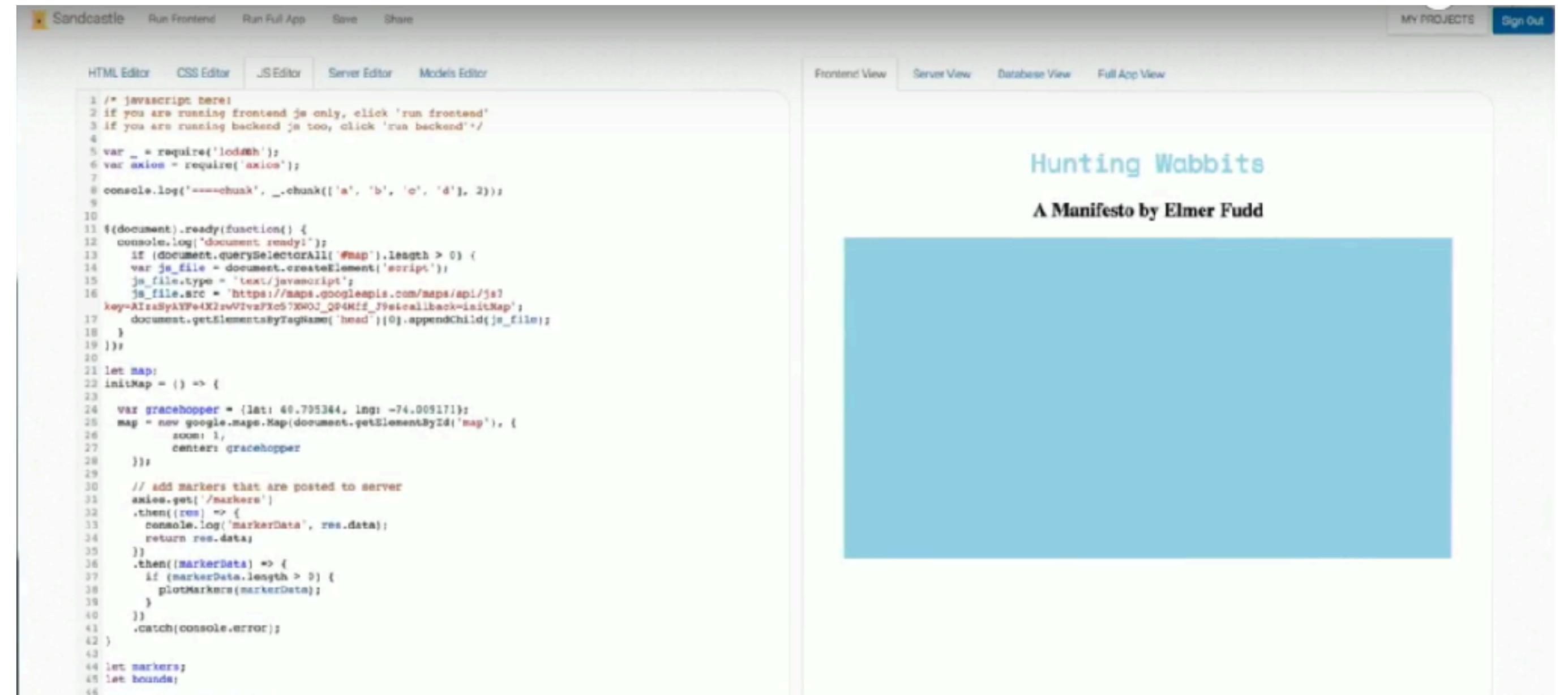
Cryptoveil (1504)

- Simple, relatable problem set
- Effective use of scaffolded design
- Chrome extension



Sandcastle (1701GH)

- In-browser text editor for web code
- Leverages Docker and Firebase
- JSFiddle for the full stack



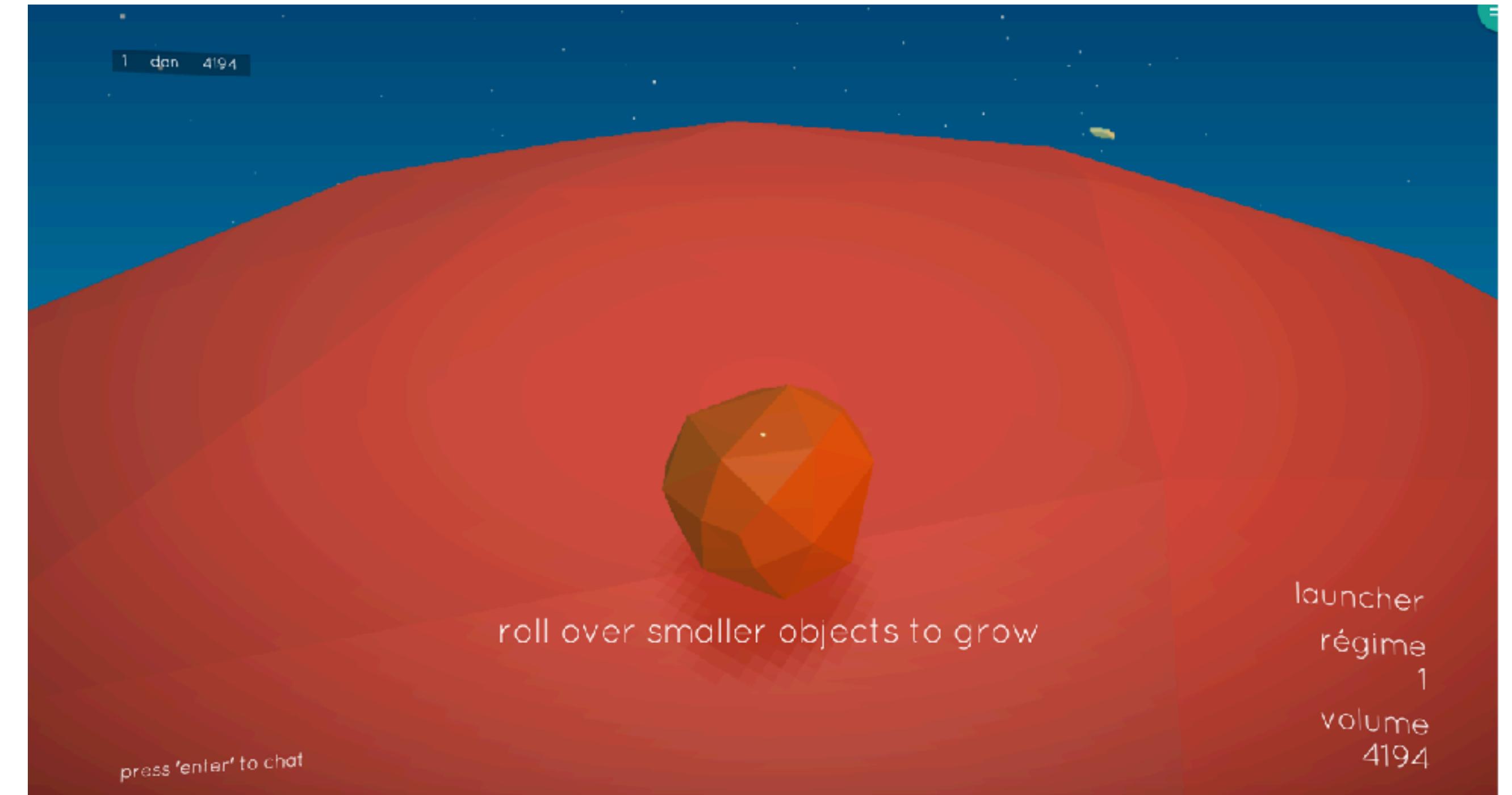
The screenshot shows the Sandcastle web application interface. At the top, there's a navigation bar with tabs for "HTML Editor", "CSS Editor", "JS Editor" (which is selected), "Server Editor", and "Models Editor". Below the tabs, there's a "Save" and "Share" button. The main area has tabs for "Frontend View", "Server View", "Database View", and "Full App View". On the left, the "JS Editor" tab contains the following code:

```
1 /* javascript here!
2 if you are running frontend js only, click 'run frontend'
3 if you are running backend js too, click 'run backend' */
4
5 var _ = require('lodash');
6 var axios = require('axios');
7
8 console.log('====chauk', _.chauk(['a', 'b', 'c', 'd'], 2));
9
10
11 $(document).ready(function() {
12   console.log('document ready!');
13   if (document.querySelectorAll('#map').length > 0) {
14     var js_file = document.createElement('script');
15     js_file.type = 'text/javascript';
16     js_file.src = 'https://maps.googleapis.com/maps/api/js?key=AIzaSyAXPw4X2swV1va7Tcb7XHOI_9t4MifJ_9tcaliback-initMap';
17     document.getElementsByTagName('head')[0].appendChild(js_file);
18   }
19 })
20
21 let map;
22 initMap = () => {
23
24   var gracehopper = {lat: 40.705344, lng: -74.009171};
25   map = new google.maps.Map(document.getElementById('map'), {
26     zoom: 1,
27     center: gracehopper
28   });
29
30   // add markers that are posted to server
31   axios.get('/markers')
32     .then((res) => {
33       console.log('markerData', res.data);
34       return res.data;
35     })
36     .then((markerData) => {
37       if (markerData.length > 0) {
38         plotMarkers(markerData);
39       }
40     })
41     .catch(console.error);
42
43
44 let markers;
45 let bounds;
```

To the right of the code editor, there's a preview area with a blue background. It displays the title "Hunting Wabbits" and the subtitle "A Manifesto by Elmer Fudd".

Agamari (1609)

- Clone of popular game (Katamari Damacy)
- Employed 2x Redux Stores
- Went viral (150 DAP week after Demo Day)



88 Keys (1609)

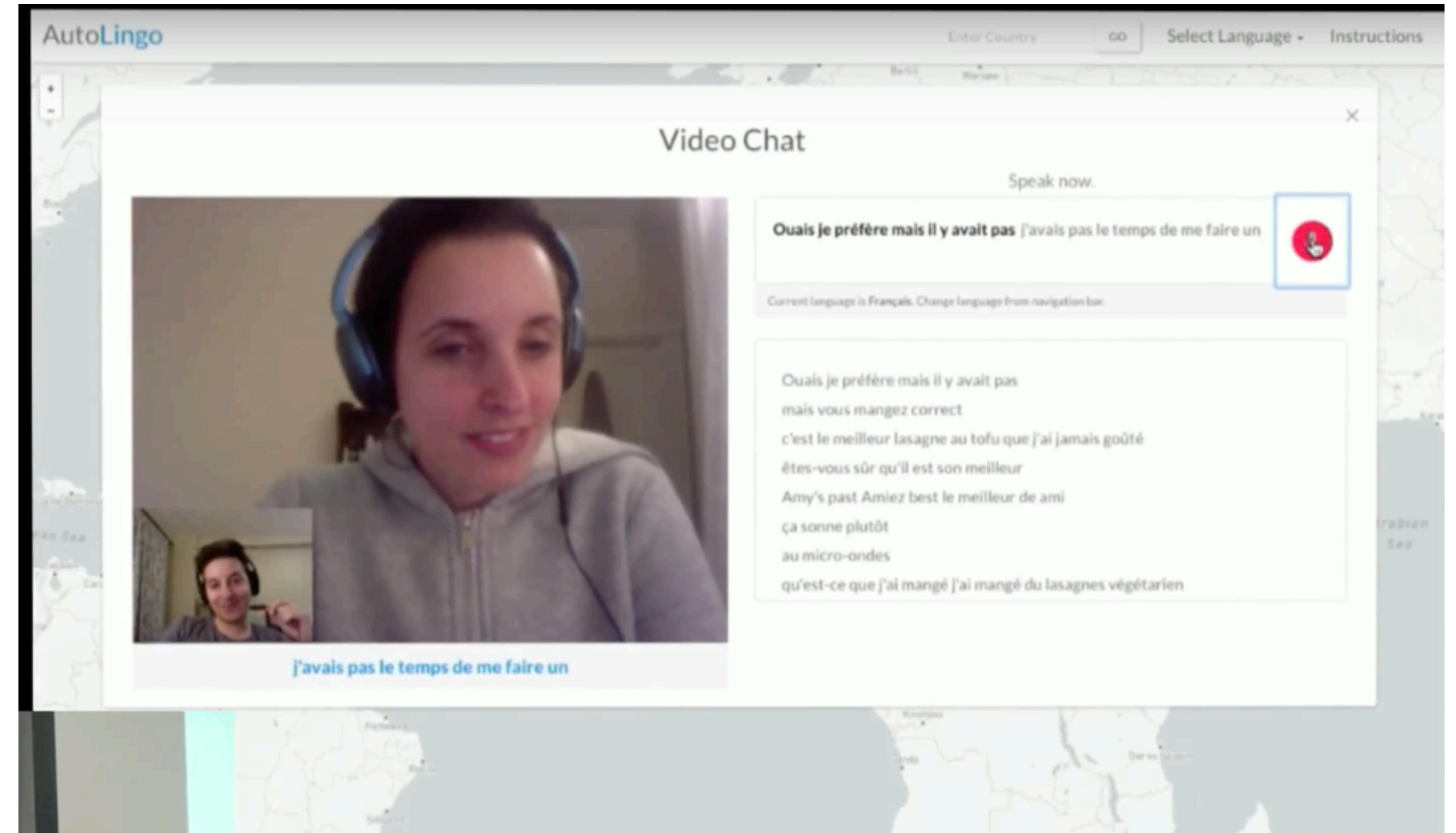
- Music Education game
- Utilized external hardware (mini keyboard)
- Strong visual design/branding

The screenshot shows a web browser window for the URL eighty-eight-keys.herokuapp.com/slides. The interface features a red header with three white circles containing musical notes. Below the header is a navigation bar with checkboxes for "ACCIDENTALS" and "BLACK KEYS". A musical staff displays two notes: a sharp note and a flat note. A text box below the staff asks, "What is this note called? If you've been paying attention, you'll know that there are two possible right answers!" At the bottom is a piano keyboard graphic with one key highlighted in blue.



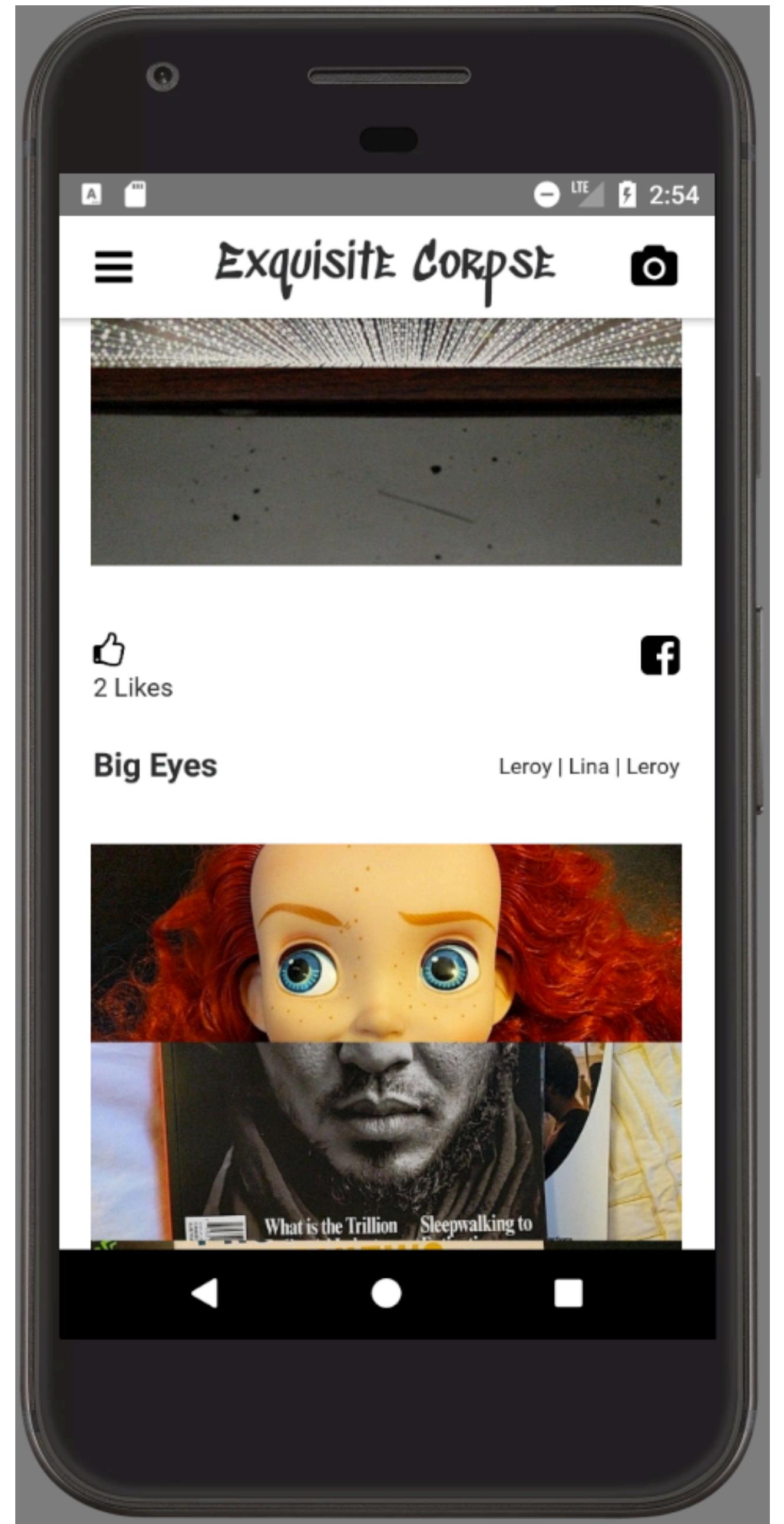
AutoLingo (1610)

- Real time translations/
language buddy social
network
- Utilized IBM Watson and
RxJS Observables to great
effect
- Solved a real problem



Exquisite Corpse (1706RM)

- Photo-sharing game based on 20th century surrealism
- Built with React-Native, heavy use of native APIs
- Won our “Facebook Live” award



Let's brainstorm!