Group Project Presentation: HEALTHY COMPETITION
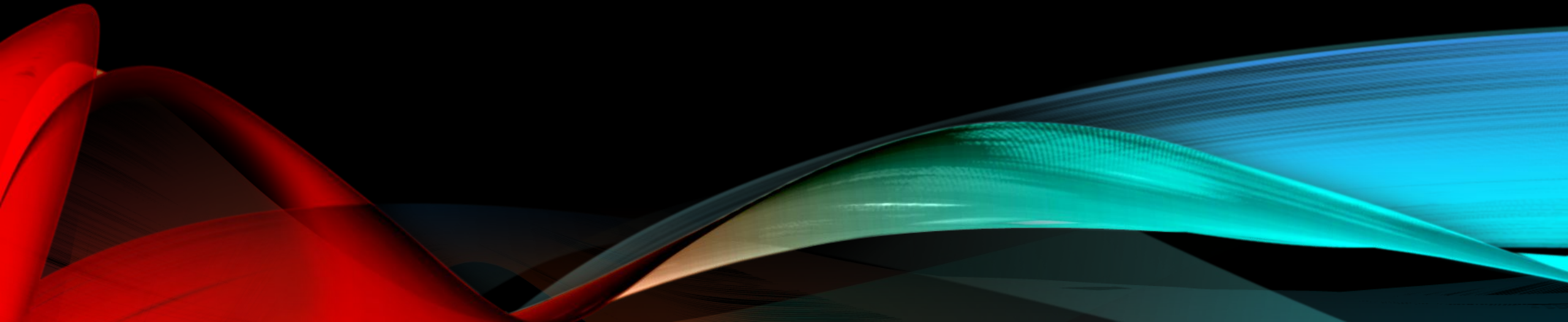
Group 1: Chris Pastor, Brad Kurzawa, Ella Miller, Seth Johnson, Hanna Chang, Romina Charles

https://healthy-competition-412.herokuapp.com/

PROJECT OVERVIEW

Create a website that serves as an interactive competitive fitness tracker. The site will allow users to create an account that stores and tracks fitness metrics and goals. Accounts can be linked together in groups to create team challenges. The site will allow users to track progress during the course of their journey of making healthy choices and lifestyle changes. While the site can be used individually, the intent of the site is to help groups of people physically benefit from a competitive playing environment. The website fosters a sense of community and support by allowing players to share progress amongst each other while remaining focused on their goal of achieving a healthier lifestyle.

TEAM MEMBER ROLES AND CONTRIBUTIONS

Chris Pastor - Lead Developer - Initialization of product's front end, back end and database, lead development meetings, organized development strategy

Ella Miller - **Developer/UI Designer -** Created mockups for product user interface, developed site components, css styling

Romina Charles - Client Liaison/Developer - Documentation lead, developed site components, presentation slide design, login service configuration

Seth Johnson - Developer/UI Designer - Created mockups for product user interface, developed site components.

Brad Kurzawa - Developer/Team Manager - Responsible for configuration management, team organization and meeting setup, page setup and configuration

Hanna Chang - Developer/Test Lead - Developing site components, documentation and testing skeleton, System testing.

PROJECT REQUIREMENTS

Account Creation

- User must input username, password, and email address for account creation.
- All account information must be stored.
- The website must determine whether the username is already in use, and send a verification email upon account creation.

Solo Play

- User inputs their respective data for game initialization - current weight, goal weight, length of game, time between inputs
- Upon game creation, user is able to enter their expected user metric - e.g. weight - input validation is performed on metrics
- System should output graphical display of all data entered by user
- User total weight change, weekly average weight change and weight change needed to reach goal should be displayed

Team Multiplayer - Features all elements from Solo Play and the following additional functionality:

- System should output a graphical display of the team's cumulative progress - statistics regarding total amount of weight lost by the team, weekly average weight change, and the amount of weight change needed to reach the team's set goal.
- User leaderboard is present showcasing the three "highest-scoring" members of team
- All group member names and profile images are displayed - on click, user is sent to respective member's user page
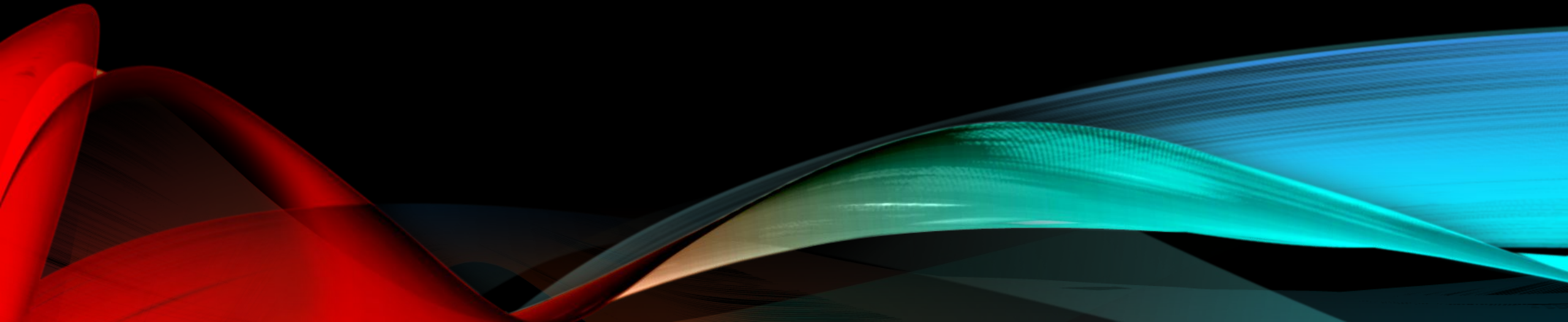
User Profile Page

- Display user's profile image, biography and friends list
- Display all of the user's active games and corresponding data
- Allow user to update individual game metrics via add button

Donations

- System must store donor's name, billing address, payment information, and donation amount.
- Users should receive payment confirmation along with an email after the payment is processed.
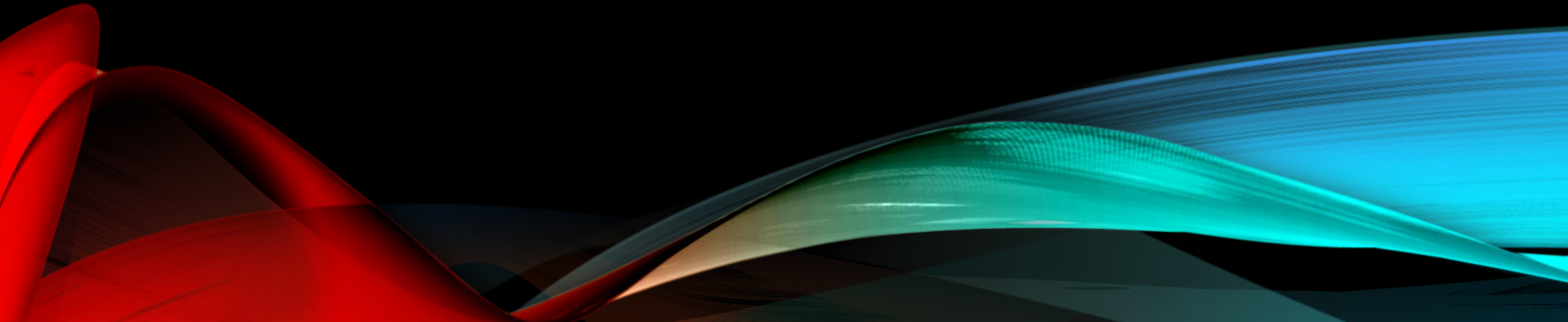
METHODS, TOOLS, AND TECHNIQUES

 The Application will be developed as a web application and should function on all common browsers.

 Code will be written in TypeScript using React UI framework and UI Component library PrimeReact.

 Frontend bundled with Parcel

 Backend server written in Node.js using Express and TypeScript.

 Database will be MongoDB.

 Login and user authentication done with Auth0.

 Linting with eslint

 Unit Testing framework will be done with Jest and Enzyme.

 Hosting on Heroku along with building and deploying

UPCOMING FEATURES

- **Launching of Multiplayer Modes**
  - **Frontend components complete**

- **Additional Metric Tracking Options - running distance, calories consumed**

- **Facilitate Advertising on Game Pages from appropriate vendors**

- **Friend System - allow users to view friends' profile pages and quickly create group games - viewable on profile page**

- **Enhance display - additional CSS, spacing of page components**

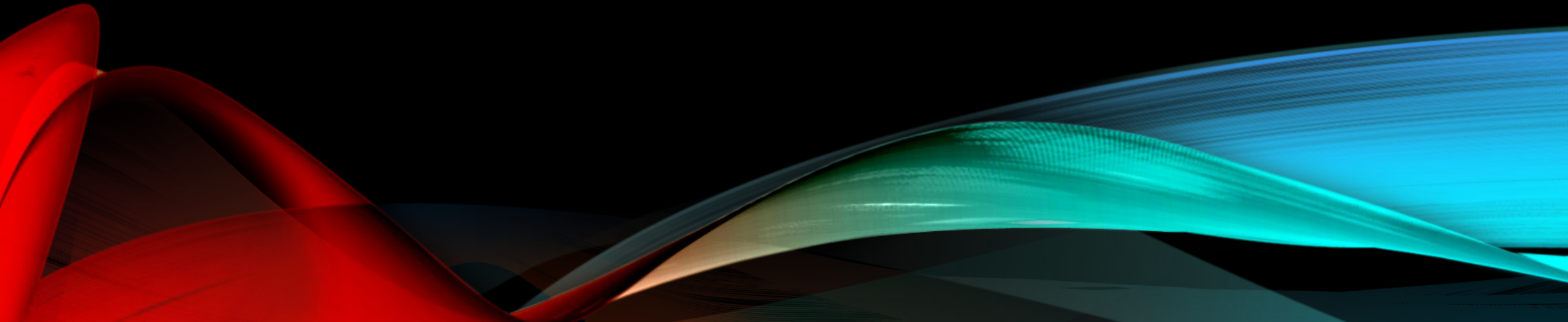# OBSTACLES AND PROJECT REFLECTION

Development Difficulties:

- Lack of experience with JavaScript/TypeScript - learning curve slowed development

- Full MERN stack development with TypeScript on top proved ambitious and time-consuming

- Cutting Edge tools proved to be troublesome (Parcel, Mobx, TypeScript)

- Unit testing had to be scrapped due to TypeScript

- For all group members Allocating time between all other classes and responsibilities was difficult

Group Strengths:

- Open and consistent communication - flexible availability for bi-weekly meetings and code reviews

- All members were active in team meetings and resilient despite logistical difficulties

- Everyone contributed to the overall design and implementation

Current Build Demonstration

https://healthy-competition-412.herokuapp.com/

RESOURCES

https://github.com/ChrisPastor/healthy-competition-website

PRINCIPLES and PRACTICES for ADVERTISING ETHICS

https://prod.teamgantt.com/gantt/schedule/?ids=2339380#ids=2339380&user=&custom=&company=&hide_completed=false&date_filter=&color_filter=

https://dev.to/giteden/top-5-react-chart-libraries-for-2020-1amb

https://adrianhall.github.io/javascript/react/2020/03/29/parcel-typescript-react/

https://www.staging-typescript.org/tsconfig

https://rjzaworski.com/2018/03/testing-with-typescript-react-and-enzyme

https://mobx.js.org/README.html

https://blog.logrocket.com/typescript-with-node-js-and-express/

https://developers.google.com/adsense/host/libraries

https://www.npmjs.com/package/react-adsense

https://medium.com/@bolajifemi28/how-to-add-paypal-checkout-to-your-react-app-37d44c58a896

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https://primefaces.org/primereact/

https://towardsdatascience.com/host-a-dynamic-website-on-google-firebase-for-free-using-nodejs-and-cloud-firestore-db-88e98239e1b9