

ReSearch

Group Members

- Michael Rogers
- Alvaro Santillan
- Damien Beecroft
- Luke Soguero
- Andrew Gilfillan
- Douglas Thomas

Motivation for Project

There are many factors that make finding participants difficult

- Need to be aware of subject's...
 - Mental Health
 - Physical Health
 - Ethnicity
 - Demographics
- Many times, people do not know about studies
 - There is no place specifically for finding studies to participate in.

Motivation for Project (contd.)

Streamline the process of finding test subjects for studies

- Centralize research done by a university
 - Easier for students to find studies they may want to participate in.
- Centralize willing test subjects and relevant information on potential participants
 - All students fill out surveys with relevant information for researchers, making it easier for researchers to screen subjects.

Motivation for Project (contd.)

Why is this even viable? Why would potential test subjects sign up for this site?

- Many studies will offer money for students that participate.
 - Students may be interested in participating in the study.
 - This site will be a great way for college students to make a bit of money.
 - It's a win-win



Methodologies

- Began the project wanting to use Agile, later became more Waterfall-oriented
- The team communicated through Slack and scheduled group meetings 1-2 times a week to go over progress, what tasks should be done next, and work on Project Milestones.

Front-End

- HTML (4 / 5 stars)
 - Used to make the general outline of the front end.
- CSS/Bootstrap (3 / 5 stars)
 - Used to make the front end pretty
- Javascript (5 / 5 stars)
 - Functionality and Scripts
- Balsamiq Markup 3 (4 / 5 stars)
 - To create the wireframes



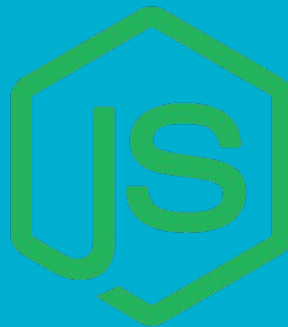
Back-End

- PostgreSQL (5/5 stars)
 - Used for our database



Integration and Deployment

- NodeJS (4/5 stars)
 - Used to integrate front-end with back-end database
- Heroku (3.5/5 stars)
 - Used as our Deployment environment, as well as hosting our database.



Project management Tools

- GitHub (5 / 5 stars)
 - Used for Version Control Repository
- Freedcamp (1 / 5 stars)
 - Used as a Project Tracker
- Slack (5 / 5 stars)
 - Used for general group communication



Security

BCrypt

- Why BCrypt?
 - BCrypt encryption takes a very long time to check
 - Time to check a hash can be altered to keep up with faster processors
- How BCrypt works
 - Salting
 - Encryption loop



Security (contd.)

Requiring users to create account instead of using default

- Many people never change the default username and password
 - Hackers could easily break into these peoples' accounts and steal information.
 - Example: Oracle
 - User: Scott
 - Password: Tiger

Challenges (Front end)

- CSS centering
- Working with images
- Display issues with javascript and bootstrap.
- The card in the research profile, Making anchors work.
- Save changes error in student profile section.

Challenges (Back end)

- The initial setup of Heroku (page navigation, post requests, rendering get requests, proper database configuration and port listening, ensuring node/npm were properly working) was difficult.
- Heroku was a bottleneck, after a point in time the rest of the project was simply waiting for the database to be deployed on heroku.
- Figuring the best way to store session data after users logged in was a challenge.

Challenges (Security)

- Changing the queries
 - The hash cannot be used outside of the BCrypt function
 - The syntax and functionality were completely foreign
- Testing passwords
 - Need to hash the password when attempting logging in
 - Again, syntax was the primary issue

Site Demo

- <https://csci3308-madlads-research.herokuapp.com/>

Sites

- Security:
 - [Implementing BCrypt](#)
 - [Understanding BCrypt](#)