

Space-Invaders

JERKS Final Presentation

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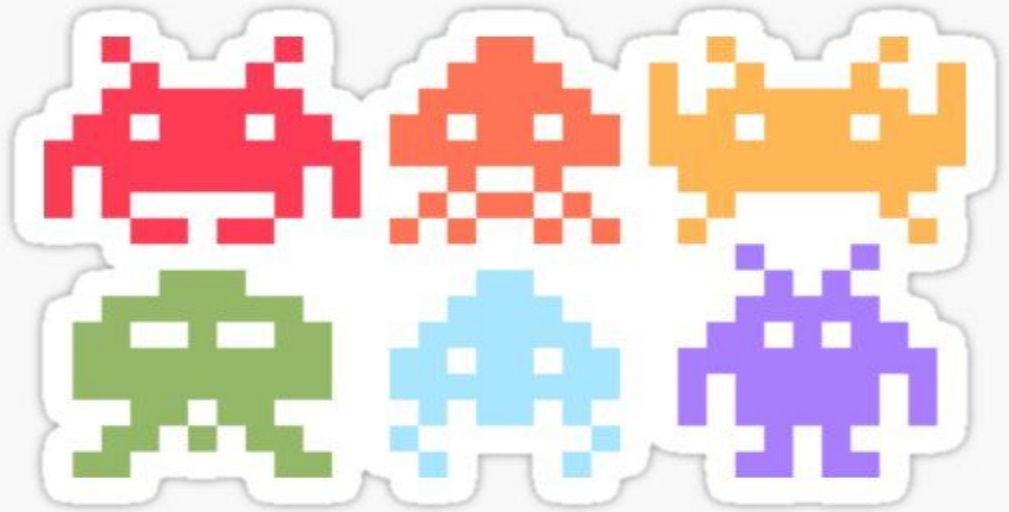
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Project Background

Motivation

- Our goal was to create a web application to mimic and modernize the renowned, retro arcade game Space-Invaders
- All of our team members have been avid fans of the game since it was released

Functionality

- The modernized take on the game is through a login system to save previous progress as well as a profile page to view updates on your scoring

Implementation

- The implementation of our web application was through firebase for the backend/server as well as React, JavaScript, and HTML for the frontend

Asset Design

Image/Audio



Images

All of the sprites used in the game were handmade pixel by pixel using piskelapp.com



Audio

8 bit audio was created using <https://sfxr.me/>



Central Features

- 1 Dynamic Data
- 2 Upload Data from Client to Backend
- 3 Meaningfully Search Through Server-side Data

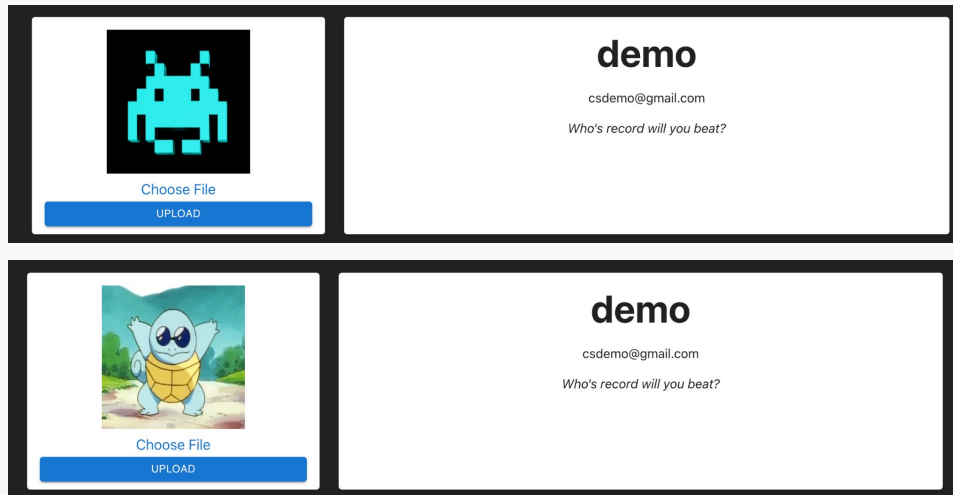


Dynamic Data



PFP Updates

- Displays custom profile picture, username, and email (all stored in backend) when opening the profile tab
- User has option to change the profile picture



Upload Data from Client to Backend



Score Upload

- Uploads user score to Firebase after every game they play

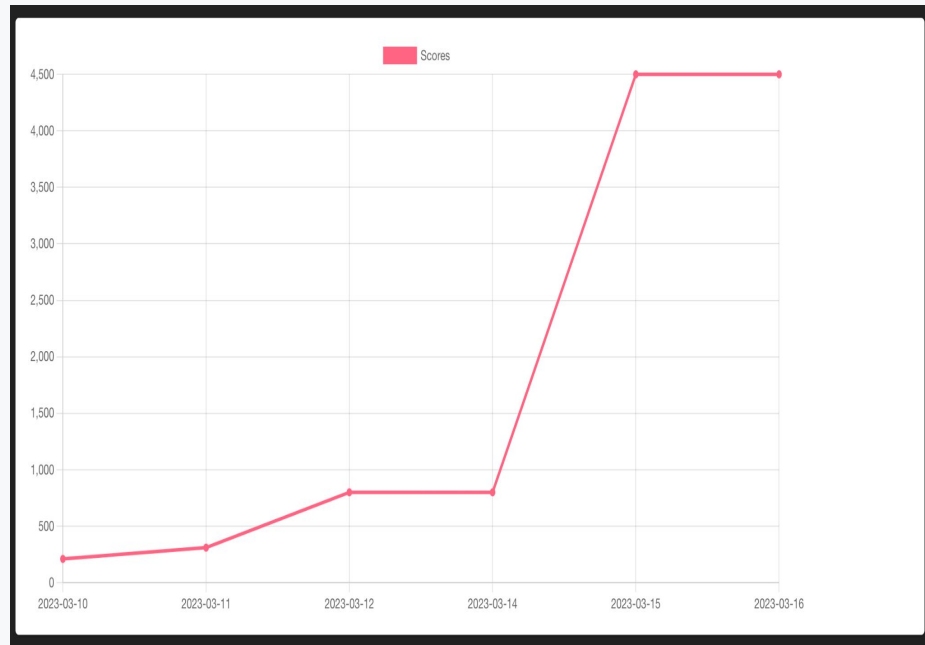


Meaningfully Search Through Server-side Data



Scoring History

- On the profile page, we provide data on the history of user's scores and create a line chart to represent them
- Chart created by sorting the dates and when the highest scores were achieved



Unique Features

- 1 Real-time Score & Armor Updates
- 2 Player/Alien Movement
- 3 Login & Registration
- 4 Laser Shooting (Player/Alien)

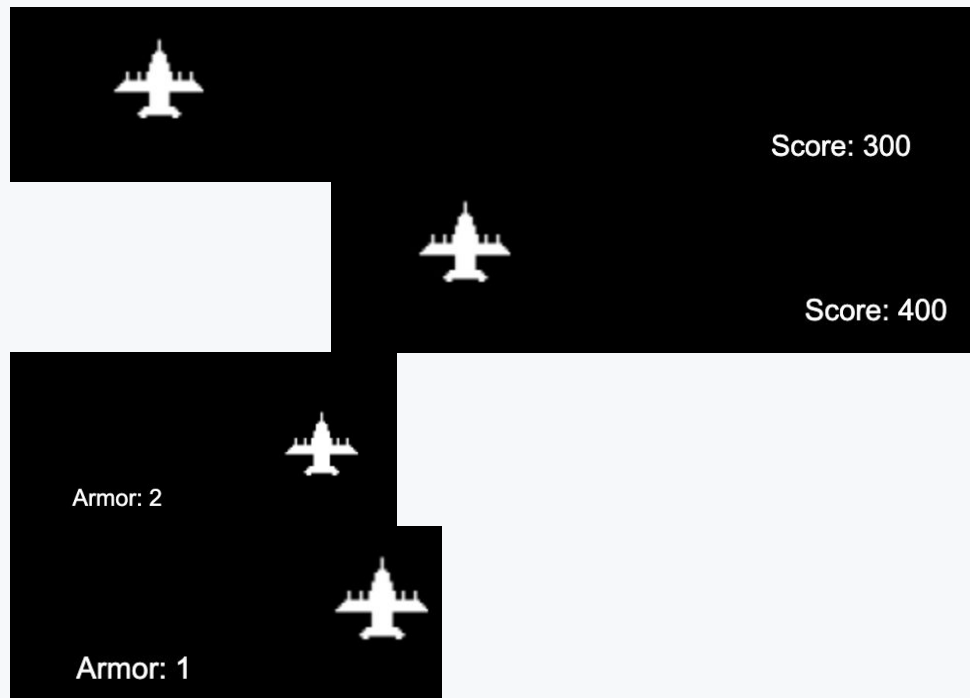


Real-time Score & Armor Updates



Real-time Updates

- Display real-time updates of score, based on # of aliens killed and waves progressed
- Updates armor left with every laser hit taken by the ship



Player/Alien Movement



Movement

- Enabled alien scrolling as a wave so that all the aliens are aligned and go to one end of the screen before descending towards the player
- Allowed player to move left and right using the keyboard



Login + Registration



Login and Registration

- Saves user login information when they register an account and uploads to backend.
- Searches through backend data to find user's login information to save data

Sign up

SIGN UP

[Already have an account? Sign in](#)

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Sign in

newtest@gmail.com

.....

SIGN IN

[Don't have an account? Sign Up](#)

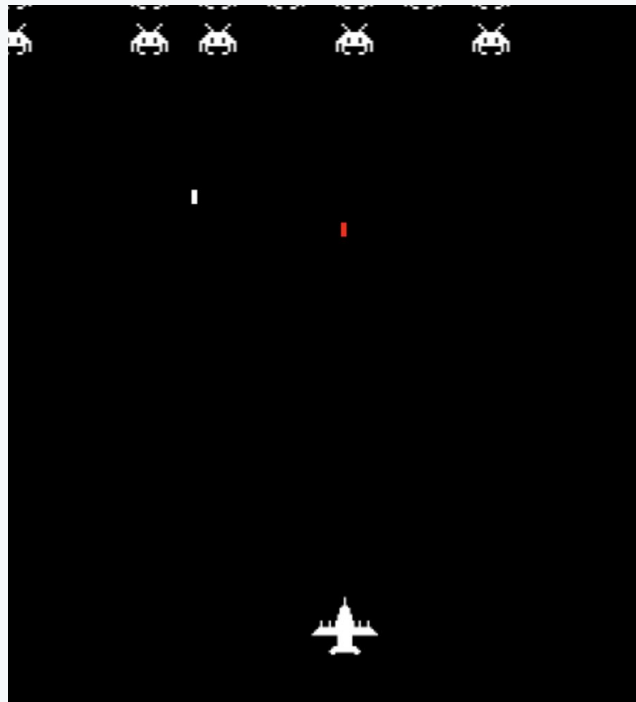
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Laser Shooting (Player/Alien)



Projectiles

- Made it possible for the player to destroy aliens by shooting them with a laser projectile
- Aliens randomly shoot back at player to affect player "armor"
- Added sound to both lasers



The background is a solid dark gray. It features three large, thin circles. One circle in the bottom-left is light blue. Two circles in the top-right are white, with a smaller blue circle overlapping the bottom-right portion of the larger white circle.

Demo