

Thomas Cantwell, Software Engineer

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thomascantwell.com | [Github](#) | [Blog](#)

TECHNICAL SKILLS

Proficient: JavaScript, React, Redux, Ruby, Rails, Rspec, SQL, HTML, CSS, Photoshop

Working Knowledge: Node.js, C++

TECHNICAL PROJECTS

Pixel V - <https://pixelvee.netlify.app/> | [Github](#)

Advanced pixel art drawing app.

- Built around an undo/redo stack for actions as the foundation to make the app easy to use.
- Made an HSL color picker from scratch for intuitive color selection.
- Implemented tool for making bezier curves with pixels so users can easily make natural curves.
- Tech Stack: JavaScript, CSS

A* Pathfinding Visualizer - <https://astarpathfinder.netlify.app/> | [Github](#)

Pathfinding visualizer to see how A* algorithm works step by step.

- Implemented a custom map drawing method to allow users to try the algorithm with any maze they can imagine.
- Built several types of calculation methods so users can see how they affect the efficiency and nature of the path.
- Designed interface for changing settings to make the program easy to use.
- Built several random maze generators using different algorithms to make it easy to try pathfinding in mazes.
- Tech Stack: JavaScript, CSS

PixTile - <https://www.pix-tile.com/> | [Github](#) | [Demo](#)

Drawing app designed to help people make repeating patterns, whether for repeating textures in games, textile design, or for helping those with artist's block.

- Implemented user authentication and authorization to allow users to save their images to the database.
- Designed a color replacement method by creating an offscreen canvas with a minimum size version of the user's image and iterating over that, enabling users to replace colors on the fly.
- Stored pixel information in hashes to enable more efficient color mapping, allowing user to select much larger sizes for their designs.
- Created a 9-grid interface for drawing that facilitates ease of making repeatable patterns.
- Tech Stack: React, Redux, Rails, PostgreSQL, Active Record, CSS

Snail Racing - <https://cryptic-badlands-26813.herokuapp.com/> | [Github](#) | [Demo](#)

An interactive app for creating, racing, and betting on snails.

- Designed a custom character creation feature to allow users to create their own snails.
- Created an algorithm for dynamic race animation based on snails' attributes to ensure race results are always different and provide unique user experiences.
- Implemented user authentication and authorization to allow users to save bets to the database and view winnings.
- Tech Stack: Rails, PostgreSQL, Active Record, CSS

EXPERIENCE

READY-SET-WEAR, LLC - Co-owner

Online resale business specializing in selling designer handbags and clothing through merchant sites such as ebay and tradesy.

New York, NY

07/2015 - 03/2020

EDUCATION

Flatiron School

Full Stack Web Development, Ruby on Rails and JavaScript program

New York, NY

01/ 2020 - 05/2020

Foothill College

Took supplemental courses in math and science

Los Altos Hills, CA

01/2012-06/2013

University of California, Irvine

Bachelor of Arts in Studio Art

Irvine, CA

06/ 2010