

# WINSTON SMITH

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## EXPERIENCE

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### Recurse Center, *Participant*

May 2019 - August 2019

- Pair-programmed with over 25 people, learning how to work well with many different personalities on various types of projects. – *JavaScript, React, CSS, Rust, Python, Ruby, Haskell, C*
- Created a web app that allows users to edit and visualize L-Systems, written in JavaScript with p5.js.
  - Includes a button to export the lines to pen plotter code (HPGL). Initial purpose was to encourage others to use a HP7440A Pen Plotter to make art. Held twice weekly workshops to help people to use the editor and set up their computers to interact with the pen plotter.
  - Features include automatic updating, ability to pan and zoom, sliders to control angle and other parameters, text boxes to set the axiom and rules, preset L-Systems in a dropdown menu, three color modes, and save and load buttons.
  - Led an in-depth workshop to explain L-Systems and guide the attendees on using the editor.
- Built many animations with JavaScript and the p5.js library.
- Gave presentations on four projects: (1) an L-Systems editor, (2) interactively creating music with the Mandelbrot Set, (3) an animation of lines of equal lightness, and (4) an animation depicting various feelings. – *JavaScript, p5.js, Tone.js*
- Explored Rust by completing the book *The Rust Programming Language*. Implemented Conway's Game of Life in the browser by compiling Rust code into WebAssembly.

### Independent Study

June 2018 - May 2019

- Learned modern JavaScript by reading and working on exercises from the book *Eloquent JavaScript*.
- Built data visualizations with d3.js and learned SVG and CSS3.
- Made a Vue.js app by completing a series of courses from Vue Mastery.

## PROJECTS

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### Undergraduate Research, *Combinatorial Design*

August 2017 - May 2018

- Worked to find optimal solutions to various combinatorial design problems which arrange different object types on a triangular grid. – *Combinatorics, Graph Theory*
- Generated designs and exported them as images. – *Python, matplotlib*
- Wrote a web application to display designs on demand. – *R, Shiny*
- Presented at an Undergraduate Symposium in April 2018.

## EDUCATION

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### Kennesaw State University, Kennesaw, Georgia

Graduated May 2018

- B.S. in Mathematics, Minor in Computer Science

## SKILLS

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JavaScript, React.js, p5.js, Python, C++, Linux, Bash,  $\text{\LaTeX}$