

# Full-stack Engineer

# Sean Roberts

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**Portfolio:** <https://seanroberts.herokuapp.com/>

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## Work

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### Software Engineer at A Free Bird

Jan 2021 - Present Remote

A Free Bird is a non-profit organization that helps kids aged 4-18 affected by cancer through the therapeutic benefits of the arts. The web development team aims to turn the static website into an interactive platform for families to utilize while COVID-19 continues to prevent face-to-face interaction.

#### Experience:

- I'm spearheading the implementation of automated testing throughout the website with unit testing and integration testing.
- I'm leading the effort to integrate an interactive magazine into the website, which will become a major contributor to the organization's outreach.
- I've accelerated my own and other's growth through code reviews, pair coding, and 1-on-1s with the lead developer.

### Associate at ALDI

May 2017 - Present 2395 Silver Dr, Columbus, OH

#### Experience:

- I am an integral part of the customer's positive experience with my communication skills, adaptability, and team-oriented philosophy.
- I work for the most profitable ALDI in the division and as such know how to work under pressure while prioritizing the customer's satisfaction.

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## Projects

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### Swerl - Financial Web App

A web application that allows users to sign up and keep track of their expenses by utilizing an array of tools including expense input and editing (CRUD functionality), customizable budget goals, and visualization with dynamic charts.

- Enables the user to take control of their finances and to see how they can adjust their spending based on the budgeting goals they set.

**Technologies / Libraries:** Python, Django, HTML, CSS, Javascript, Pandas, Plotly, SQLite

### WeatherMusic - Weather Data Web App

A web application that takes a user's location and accesses APIs to determine the user's local weather conditions, displays the weather conditions, and plays themed music.

- Provides the user with an enjoyable way of checking their local weather conditions by incorporating weather themed music based on those conditions.

**Technologies / Libraries:** Python, Flask, Jinja2, HTML, CSS, Javascript (& AJAX), SQLAlchemy, Regular Expressions Library, Google Geocoding API, YouTube API, National Weather Service API, HTML5 Geolocation API

## Sorting Algorithm Visualizer GUI

A GUI built with Tkinter that allows the user to generate a random array, with control over size and magnitude, and then perform 1 of 4 sorting algorithms with accompanying visuals.

- Used to help the user to further their understanding of these 4 popular sorting algorithms through a fun and visually appealing way.

**Technologies / Libraries:** Python, Tkinter, Ttk (styling), **Algorithms:** Bubble, Merge, Quick & Heap Sort

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## Education

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### Self Taught / Full-stack Engineer

February 2020 - Present Columbus, Ohio

I utilized a variety of sources to aid in my development. CS50 allowed me to develop a deeper understanding of computer science fundamentals and introduced me to several languages including C, Python, HTML, CSS, and JavaScript. Pairing that with CodeCademy and Hyperskill made me proficient in Python, HTML, CSS, and JavaScript. Supplemental sources (books, DS+A courses, etc.) provided additional context to my understanding of concepts like object-oriented programming, data structure, and algorithms. Together, I have used these resources to become a capable full-stack engineer.

#### Relevant Coursework / Resources:

- Harvard's CS50 (Intro to Computer Science), Google's Intro to Data Structures & Algorithms, CodeCademy's Python, JavaScript & React courses, *Automate the Boring Stuff with Python* by Al Sweigart, *Algorithms Fourth Edition* by Robert Sedgewick and Kevin Wayne, JetBrains Academy (Hyperskill), StackOverflow, GitHub, and, of course, YouTube.

### The Ohio State University / B.S. in Atmospheric Science

August 2016 - April 2019 Columbus, Ohio

I took a wide variety of math and science courses, ultimately learning to apply quantitative problem-solving methods to complex situations. I have found the skills I built earning my B.S. to be beneficial in both learning technologies and building projects.

#### Relevant Coursework:

- Statistical Analysis 1, Fundamental GIS, Calculus 1, 2 & 3, Differential Equations and Their Applications, Physics 1 & 2, Microclimatological Measurements

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## Skills & Interests

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**Skills:** Python, Django, Flask, JavaScript, React, SQL, HTML5, CSS3, Git, Tkinter, Bootstrap

**Interests:** Coding, Meteorology, Hiking, Biking, Travel, Games

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## Socials

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**Github:** <https://github.com/SeanFromOhio>

**LinkedIn:** <https://www.linkedin.com/in/sean-roberts-ohio95/>