

# Isabella Laybourn

[ilaybour@andrew.cmu.edu](mailto:ilaybour@andrew.cmu.edu) | (907) 738-4272

[linkedin.com/in/bellalaybourn](https://www.linkedin.com/in/bellalaybourn)

[andrew.cmu.edu/user/ilaybour](https://andrew.cmu.edu/user/ilaybour)

## Education

**Carnegie Mellon University** | 2019 – 2023

Bachelor of Science in Computer Science

Concentration in Software Engineering,

Minor in Animation and Special Effects

Dean's List Fall 2019

**Stanford Online High School** | 2015 – 2019

## Skills

**Programming Languages:** Java, Python, C, C++, Go, SML, C#, Arduino, Particle, HTML, LaTeX

**Programs:** Adobe (Premiere Pro, Photoshop), Autodesk Maya, Unity, Docker, AWS, git, bash

## Projects

**Biometric Shirt** | 2018 – Present

- Programmed biometric shirt using LEDs to monitor temperature and activity for a Dravet Syndrome patient
- Created two working prototypes using Arduino, Adafruit, and Particle IoT boards
- Testing a feature that writes gathered temperature/activity information to a ThingSpeak channel

**Game Bytes** | Fall 2019

- Programmed and animated actors in sports-themed fighting arcade-style minigame Sporshmallow in Unity with team for CMU's Game Creation Society

**Transitions and Effects** | 2017 – Present

- Programmed 2D video effects and transitions, including feathered wipes and a background-agnostic chroma key (green screen effect)

## Relevant Coursework

17-214 Principles of Software Engineering

15-210 Parallel Data Structures and Algorithms

15-251 Great Ideas in Theoretical CS

15-150 Principles of Functional Programming

15-122 Principles of Imperative Computation

(TA) 15-151 Mathematical Foundations for CS

## Experience

**Salesforce** | Summer 2020

Infrastructure Security Intern (REDSCAR Team)

- Categorized over 600 security bugs filed by Infrastructure Security Advisory team and collaborated with Secrets team to uncover best areas and develop automated support for secret rotation
- Integrated secrets management program Vault and internal database GUS APIs with Python script for AWS Lambda and Go program in Docker container
- Performed design review for security assessment

**Carnegie Mellon University** | Fall 2020

Teaching Assistant, 15-151/21-128

- Taught weekly recitations, held office hours, and graded homework and exams
- Helped students understand and apply class concepts including logic, functions, and probability

**Cyber Crucible, Inc.** | Spring 2020

Software Engineering Intern

- Developed voice recognition software for security authentication in Java to be used in an Android app
- Integrated REST APIs with Android app

**Wired Wolves Robotics Club** | 2017 – 2019

Team Leader/Programmer

- Leader and sole programmer for the Wired Wolves in the 2017-18 and 2018-19 First Tech Challenge robotics competitions (Alaska State Control Award in 2019)

**Girls Can Code Club** | 2015 – 2019

Club Leader

- Taught Python and Unity
- Participated in app-building competition Technovation 2017 and 2018 (semifinalist) and mentored other participants

**Sitka Public Library** | 2016 – 2018

Summer Volunteer Course Instructor

- Designed and taught workshops in Scratch, MIT App Inventor, web development, and video editing