

Emily Root

Software Engineer

Details

Raleigh, NC
United States
919-368-8299
emily@emilyroot.com

Education

North Carolina State University
B.S in Computer Science
Anticipated May 2025

Languages + Frameworks

Java, Python, C++, C#, HTML/CSS, C, JavaScript, SQL, Snap, Scratch, Angular, React, Bootstrap

Other Skills

Unity, Godot, Game Maker Studio 2, Unreal Engine, Live2D, Blender, Git

Relevant Coursework

Data Structures, C/Software Tools, Operating Systems, Software Engineering, Game Engine Foundations, Interactive Game Design, Building Game AI, Intro to AI, Computational Visual Narrative

Projects

Gainz: The Financial Literacy Game | 2024 | 2D pixel game built in **Godot** for underprivileged youth about finances
Connect 4 AI | 2024 | Connect 4 game with visualization and enemy AI built in **Python** and **Java**
CoffeeMaker | 2023 | Full stack coffee ordering system built using **Java**, **HTML/CSS**, **Javascript**, and **MySQL**

Links

<https://www.linkedin.com/in/eeroot/>
<https://www.emilyroot.com/#about>

Profile

Detail-oriented software engineer with experience in object oriented languages, passionate about creating innovative software, with strong programming and problem solving skills. Experienced in designing interactive and effective software, websites, and games that balance depth and accessibility.

Work Experience

Teaching Assistant, NCSU

January 2022 - Present

- Instructed 200+ students in fundamental programming concepts using **Python** and **Snap**
- Mentored students in developing debugging and testing
- Analyzed course content to improve the lives of students and teaching assistants as a lead TA

Front-end Developer, UNC Development Office

June 2023 - August 2023

- Maintained and updated websites using **HTML**, **CSS**, **JavaScript**, **Bootstrap**, **Angular**, and **React**
- Promptly resolved website issues and bugs
- Ensured visual alignment with brand guidelines

Educational Game Developer, NCSU Game2Learn Lab

June 2023 - August 2023

- Developed an educational farming simulator in **Unity** using **C#** for K-12 children
- Created an in-game block-based programming environment to facilitate problem-solving skills

Research Assistant, NCSU Game2Learn Lab

June 2022 - August 2022

- Collaborated with researchers and educators to develop new course material for a programming class centered on socially relevant topics
- Created introductory programming problems to develop students' computer science skills in **Snap**
- Developed a website using **Wordpress**, **HTML/CSS**, and **Javascript** for access to course material

Full-stack Developer, NCSU Game2Learn Lab

August 2021 - December 2021

- Delegated front and back-end tasks between teammates to create a full-stack repository for displaying games
- Developed a front-end system using **HTML/CSS** and **Javascript** to display relevant repository information

Volunteer Work

Volunteer and Officer, STARS Computing Corps

August 2021 - May 2024

- Educated 50+ middle and high school students in programming through game development using **JavaScript**, **Unity**, and **Unreal Engine**
- Organized and hosted events for undergraduates to promote stress relief and skill development