

# Mia Rolfe

## Software Engineer Intern

**Email:** hello@miarolfe.com ▪ **Portfolio:** miarolfe.com ▪ **GitHub:** github.com/miarolfe

Junior-level software engineer aiming to specialize in gameplay programming. Proficient in C++, Python, C#, Unity, Git, and Java. Adept at picking up new tools and technologies quickly on the job, and even better at teaching others the things I've learned.

### Experience

**Teaching Assistant (Introduction to Programming) @ Trinity** 09/2023 – Present

#### College Dublin

- Assisted lecturer with demonstrating and teaching introductory programming concepts through Java

**Programming Tutor @ Olus Education** 01/2022 – 08/2023

- Successfully brought ~120 9-16 year old students from zero knowledge to basic programming skills.
- Simplified and communicated programming concepts for an inherently non-technical audience.

**Path Planning Lead @ Formula Trinity** 08/2022 – 08/2023

**Technologies:** Python, C++, Robot Operating System, Pathfinding, Git

- Developed and delivered a pathfinding system for an autonomous car in Formula Student UK 2023.
- Worked closely with 4 others on the path planning team and more generally with ~20 other people working on other components of the vehicle (Control, Perception, etc.)

**GIS Developer @ Tom Phillips + Associates** 06/2021 – 09/2021

- Delivered web application using ArcGIS APIs that collated and displayed geospatial data sources.
- Worked with non-technical town planners to develop and solicit feedback on the application.

**Python Developer @ Giant Animation** 06/2019 – 09/2019

- Programmed an onboarding utility using Python & Google Workspace APIs
- Extended the utility for use across the whole studio.

Other: volunteered at conferences including Develop:Brighton, retail, running college societies, charity.

### Projects

**Introduction to Game Development (Workshop)** 10/2023 – 12/2023

- Taught an introductory course on game dev using Unity to an audience of ~30 university students
- Built up from introductory topics to a final project (twin-stick shooter)

**Fallsbury Heresy** 05/2023 - 06/2023

- Gameplay programming coordinating with narrative designers, artists, and a producer to make a narrative-focused game using Twine. Shortlisted for Narrative Design award.

## MiniFPS

02/2023 – 10/2023

**Technologies:** C++, Rendering, Raycasting,, Git, SDL, GitHub Actions, CMake, Meson

- Wrote a Wolfenstein 3D-style raycasting renderer that runs on Windows & macOS computers
- Created a custom level editor using Dear ImGui

## CHIPSZ (Microsoft HoloLens 2 Game)

01/2023 - 05/2023

**Technologies:** C#, XR, AR, StereoKit, GitHub Actions, OOP, UWP, HLSL

- Developed and released an AR action game working with 8 university students & 2 mentors at Havok
- Developed subsystems to supplement the framework we were using (no game engine used)

## Education

### Trinity College Dublin – (BA) Computer Science (ongoing)

09/2021 – 05/2025

- Covered whole computing stack from logic design to systems design
- Comprehensive coverage of 3D mathematics, discrete mathematics, algorithms & data structures
- Nominated for Software Engineering Project Industry Award (see Microsoft HoloLens 2 Game)

## Career Summary

<b>Experience</b>	6+ years developing games and applications, in my third year at Ireland's top university
<b>Languages</b>	C++, Python, C#, C, Java
<b>Technologies</b>	Unity, SDL, Pathfinding, CMake, GitHub Actions, Git
<b>Work auth.</b>	Irish (EU), UK, and US citizenship