

Shane Barrera

shanebarrera105@gmail.com | [linkedin.com/in/shanebar](https://www.linkedin.com/in/shanebar) | [shane-barrera.com](https://www.shane-barrera.com) | 813-304-5704

EDUCATION

University of Florida – Herbert Wertheim College of Engineering

Gainesville, FL

BS in Computer Science and Digital Arts, Minor in UFTeach - Mathematics

August 2020 – May 2025

TECHNICAL SKILLS

Languages: C++, Python, Java, HTML5/CSS

Frameworks/Tools: MongoDB, Express, React, Node.js, Swing GUI, Git, VS Code

Software: Adobe After Effects, Adobe Lightroom, Adobe Premiere, Blender, Unity, Sony Vegas

PROJECTS

Abyssal Game

January 2024 – June 2024

- Co-developed a 2D, top-down horror game in Unity, emphasizing immersive gameplay and puzzle design
- Implemented C#/ scripts to create dynamic enemy behavior and a "fear level" mechanic that enhances tension
- Designed levels' particle systems, interactive lighting, and sound design to intensify an unsettling atmosphere
- Conducted play-testing sessions to gather feedback, refine game mechanics, and evaluate user affordances

Resume Creator

June 2023 – Present

- Integrated C++/ Python scripts to generate .docx resumes from user data and public job listings
- Developed an AVL tree/max heap to tokenize job descriptions' buzzwords against 100k+ common English phrases
- Utilized BeautifulSoup/Pandas to parse 19k+ Indeed postings' HTML data into .csv files for binary tree insertion
- Populated ChatGPT 3.5 Turbo with raw data to produce resumes onto users' OS using the Python.docx API

Silent Hill Homage

November 2022 – May 2023

- Modeled a "Silent Hill" city rendition with Blender to capture the eerie essence of Konami's horror classic
- Applied Catmull-Clark subdivision, NURBS wireframe, and UV textures onto geometric objects from scratch
- Incorporated ray tracing, pre-baking, buffer shadowing, and virtual lights to enhance realistic antialiasing (FXAA)
- Animated camera movement with key frames, paths, and drivers to showcase realistically painted/bumped shaders

WORK EXPERIENCE

Photographer

August 2024 – Present

Harn Museum of Art

Gainesville, FL

- Photograph Harn interns, highlighting their respective roles to 5,000+ followers to boost museum engagement
- Document museum events and rotating exhibitions for marketing reports, showcasing relevant donor contributions
- Enhance digital media for seasonal magazines and newsletters using Adobe Lightroom and Adobe Photoshop

Teaching Intern

January 2024 – June 2024

Kanapaha Middle School

Gainesville, FL

- Prepared 100+ Pre-algebra students for the FAST using review games such as Jeopardy, Kahoot, and GimKit
- Created lesson plans aligned with CPALMS standards, including units on circles, transformations, and scatterplots
- Embedded formative assessments and project-based learning to accommodate students' needs and promote self-efficacy within the classroom

Barista Trainer

April 2022 – Present

Opus Coffee

Gainesville, FL

- Lead training sessions for 10 locations and 70+ employees to maintain an average \$1,500 daily sales per shop
- Track weekly inventory turnover ratios for the UF Health North Tower location to maximize supply management
- Assess employee performance, and maintain high sanitation standards to enhance technical proficiency and ensure quality service in a clean, organized workspace

RELEVANT COURSEWORK

Computer Science: Data Structures and Algorithms, Discrete Math, Programming Language Concepts, Intro to Software Engineering, Numerical Analysis, Computer Network Fundamentals, Linear Algebra, Functions and Modeling

Digital Arts: Interactive Modeling and Animation, Multimedia Production, Computer-Aided Modeling, Game Design