

EDUCATION

University of Illinois at Urbana-Champaign

Bachelor of Science in Computer Science

Expected Graduation: December 2025

SKILLS

Software: Unreal, Unity, Maya, Adobe Creative Suite

Programming Languages: C++, C, Python, Java, HTML, CSS, C#

Developer Tools: Git, Perforce, Visual Studio, IntelliJ IDEA, Android Studio

WORK EXPERIENCE

Brunswick Boating Intelligence Design Lab

Champaign, IL

Computer Graphics / Software Engineering Intern

May 2023 - Present

- Led UI integration for a CES exhibit, defining tasks for each sprint cycle and presenting workflows.
- Implemented a custom UI framework in Unreal Engine, reducing development time by 20%.
- Developed a Slate tool for Unreal Editor to create customizable templates for UI elements.
- Leveraged Unreal's Niagara VFX system to create AR elements, enhancing narrative impact.
- Collaborated on a 6-member team, brainstorming in bi-weekly agile development meetings.
- Communicated closely with design and hardware teams, fostering cross-functional collaboration.

TECHNICAL PROJECTS

Wireless Sensing with Raspberry Pi to Locate Cameras | Python, Raspberry Pi

- Developed a Python multi-threaded script for real-time SenseHat IMU data collection on Raspberry Pi.
- Employed packet sniffing to monitor 802.11 packets associated with the camera's MAC address, leveraging RSSI for proximity estimation.
- Implemented a Savitzky-Golay filter to reduce velocity bias and smooth noise in accelerometer data.
- Programmed a step-detection algorithm to calculate x and y positions from IMU data.

Learn OpenGL : 3D Graphics Project | C++

- Developed shaders to render a textured, rotating cube with color overlays and matrix transformations.
- Utilized GLAD for loading, GLFW for context and window management, and GLM for matrix manipulation.
- Implemented a simple Phong lighting model to differentiate lighting effects on various materials.

AJO : Mobile Platformer Game | C#, Unity

- Coordinated with artists, programmers, and sound designers to scope and develop five game levels within two weeks.
- Implemented gesture-based movement controls using Unity's scripting API and input class.
- Designed character assets, animations, and event effects as a technical artist.
- Presented a game pitch detailing the feasibility, gameplay, and core player experience of AJO.

EXTRACURRICULAR ACTIVITIES

Society of Hispanic Professional Engineers (SHPE)

University of Illinois at Urbana-Champaign

Academic Affairs Chair

May 2023 - May 2024

- Led chapter-wide study hours to promote academic success.
- Advocated for accountability by diversity and inclusion chairs in various engineering organizations.

The Grainger College of Engineering

University of Illinois at Urbana-Champaign

MEP Peer Mentor

August 2022 - December 2022

- Mentored six students on academic and personal adjustment to college life.
- Collaborated with peer mentors to create weekly lesson plans alongside Assistant Dean Ivan Favila.