

## WORK EXPERIENCE

### Mississippi John Hurt Foundation August 2023 – December 2023 *Technical Artist & Lead Programmer*

- **Design:** Developed a “radio-dial” based interaction for a documentary exhibit in the Mississippi John Hurt Museum. Designed and fabricated the client-facing interface for simple daily operation.
- **Optimization:** Wrote custom video player for sustained 1080p/30hz playback on low-end computer.
- **Lookdev:** Developed the shader and visual style used in animated segments of our experience.
- **Animation:** Retopologized and rigged a sculpted model of John Hurt, and collaborated with a team member to ensure the animation accurately matched mannerisms from historical footage.

### Lumis Corp May 2023 – August 2023 *Technical Artist*

- **Optimization:** Defined new asset pipeline resulting in a performance increase of 1100%. Converted existing codebase and assets to use new pipeline.
- **Custom VFX Tools:** Integrated custom visual effects and into an existing pipeline. Authored specialized decal system. Created UGC tools for educators to implement effects in their learning content.
- **Collaboration:** Worked with several medical professionals to author a library of custom effects, to ensure accurate representation for training content.

### Auburn RFID Lab May 2021 – July 2022 *Project Lead & Lead Programmer*

- **Leadership:** Led production and design on a multiplayer VR “Metaverse” educational space for RFID. Oversaw hiring of 5 additional team members to continue project development.
- **Design:** Created educational minigames to teach physics principles behind RFID tags and scanning.
- **Optimization:** Created performant physics model for RFID visualization, achieving 90hz on Meta Quest 2.
- **Collaboration:** Defined project structure standards for long-term development. Met with subject matter experts at NASA. Wrote debugging tools and tutorials geared towards non-technical team members.

### Edfarm May 2021 – July 2022 *3D Generalist*

- **Design:** Directed mobile-performant art style of environment and character assets in collaboration with the BCRI (Birmingham Civil Rights Institute), including sculpting and rigging a model of Fred Shuttlesworth.
- **Animation:** Studied archival footage of Fred Shuttlesworth and created looping animations for an exhibit in the BCRI, to accompany educational content about the Freedom Rides during the Civil Rights movement.

### Auburn AR/VR Lab August 2018 – August 2020 *Programmer & 3D Generalist*

- **Design:** Directed art style for AR Museum experience, in collaboration with Moundville Archeological Park.
- **Optimization:** Created performant PBR 3D assets based on real-world models from the museum archive.

## PROJECTS

### KJ: Rechained – AR Co-op Game March 2023 – July 2023 *Programmer & 3D Generalist*

- **Design:** Created 3 levels for a “demo-disk” launch for Qualcomm’s Snapdragon Spaces Platform.
- **Programming:** Used AR gesture detection with OpenXR and ARCore to receive player input.
- **Cross Platform:** Project was prototyped on Meta Quest 2 prior to porting to Lenovo ThinkReality A3.
- **Optimization:** Renders both perspectives from same device. Achieves 90hz for AR player and 60hz for mobile.

### Two x 4 Racing – Custom Controller Racing Game November 2022 – August 2023 *Programmer & 3D Generalist*

- **Design:** Co-op game featured two custom built bike tire “steering wheel” controllers, and two monitors. Featured custom spectator view for conventions. Gameplay and hardware were developed hand in hand.
- **Programming:** Wrote custom driver for Unity for the rotary encoder on the controller. Co-developed core gameplay systems and vehicle controller.
- **Collaboration:** Developed tools for non-technical team members adjust vehicle feel, the track, and obstacles.
- **Accolades:** Accepted for Alt.Ctrl Expo at GDC. Project received media coverage from Rock Paper Shotgun. Project was invited to and playable at multiple conferences.

## EDUCATION

Carnegie Mellon University <i>Master of Entertainment Technology</i> Pittsburgh, Pennsylvania	Aug 2022 - May 2024 (expected)
Auburn University <i>Bachelor of Computer Science</i> Auburn, Alabama	Aug 2018 - May 2022

## LANGUAGES

- C++
- Python
- Javascript
- C#
- Lua
- HTML/CSS

## FRAMEWORKS & SYSTEMS

- Node JS
- Pytorch
- Tensorflow
- Linux Debian
- Linux Ubuntu
- Linux Mint

## SOFTWARE

- Unreal
- Unity
- Godot
- FMOD
- RenderDoc
- Houdini
- Blender
- Maya
- Substance Painter
- Substance Designer
- Photoshop
- Illustrator

## INVOLVEMENT

- Lead Tech TA 2023  
*Entertainment Technology Center  
Carnegie Mellon University*
- TigerDev President 2021 - 2022  
*Student Game Dev Organization  
Auburn University*
- Radio Talk Show Host 2018 - 2022  
*WEGL 91.1 FM  
Auburn University*
- Eagle Scout 2017  
*Boy Scouts of America*

## AWARDS

- Global Game Jam 2024  
*Artistic Excellence Award*
- Alt.Ctrl GDC 2023  
*Finalist*
- XR Brain Jam 2023  
*Audience Choice*
- HackGT 2018  
*Semifinalist*