

# Aashiq Shaikh

*pronounced AH-shik*

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## 👤 PROFILE

**Graphics Engineer** with **6 years of Unity experience** and **2 years of real-time graphics experience**. Looking for development positions in computer graphics and rendering.

## 📁 EXPERIENCE

**AR/VR Graduate Researcher**, *Meteor Studio* 📄

Jan 2020 – Aug 2023 | Tempe, AZ

Developed and led AR/VR development for several multidisciplinary projects in collaboration with meteorology, criminology, film, sustainability and theater departments. Developed visual effects and technical artistry skills. Also managed/mentored 25+ undergraduate students in AR/VR development across all projects.

**VR Graphics Programmer**, *Dreamscape Immersive*

Aug 2022 – Dec 2022 | Los Angeles, CA

Worked on a production narrative VR experience, developing artist and programmer facing tools to speed up development. I used HLSL and C# in the Unity environment and regularly worked with low-level shader code to develop a ray marcher and landscape mesh editing tools.

**AR/VR Unity Developer**, *Emblematic Group*

Feb 2022 – Mar 2023 | Los Angeles, CA

Led the technical development of a prototype historical narrative AR experience. I worked in the Unity engine and use HLSL and C#. Tested new volumetric video technologies and worked with 3D artists to optimize asset rendering.

**AR Application Development Intern**,

*National Center for Atmospheric Research* 📄

May 2019 – Aug 2019 | Boulder, CO

Developed a framework to create AR climate-related news articles that could be viewed with a mobile device.

**AR/VR Undergraduate Researcher**, *Meteor Studio* 📄

Jan 2017 – Dec 2019 | Tempe, AZ

Starting as a freshman, I worked as a student researcher for Meteor Studio. I developed my skills in AR/VR development, project management, and technical art. I published a paper on a programmable location-based AR data visualization framework (see **Publications**).

## 🎓 EDUCATION

**Media Arts and Sciences, M.A.**, *Arizona State University*

2020 – 2021 | Tempe, AZ

GPA: 3.93

**Computer Science, B.S.**, *Arizona State University*

2016 – 2019 | Tempe, AZ

Provost's Award Recipient, Dean's List for 7 consecutive semesters.

GPA: 3.92

## 🔗 REFERENCES

References available upon request.

## 📁 PROJECTS

**OpenGL & C++ Game Engine**,

*Kenoma Engine* 📄

Real-time graphics engine built with OpenGL and C++. Features real-time gltf rendering with multiple types of lighting (point, directional, spotlight).

**Volumetric Video Streaming**

Developed a pipeline for capturing, streaming, and rendering volumetric video content in AR/VR. I specialized in the data representation and rendering components of the framework. Used Unity, .NET Core, HLSL, and Azure Kinect.

**Ray Tracer**, *Aeon Tracer* 📄

CPU ray tracer developed with modern C++. Features object rendering with metallic and diffused materials, reflection/refraction, a physically-based camera system and BVH optimizations.

**Illumination Estimation for Photorealistic AR Content on Mobile Devices**, *GLEAM* 📄

I streamlined illumination estimation algorithms with compute shaders to take advantage of GPU parallelization, and created applications that utilized this framework. I also added support for multiple AR platforms. Used Unity, ARKit, ARFoundation, and HLSL.

**AR Framework for Map-based Immersive Data Visualization**, *Coordinate* 📄

Designed and developed an AR mobile application/framework that augments a physical map with visualizations of location-based data using user-created data spreadsheets. I worked with our university's executive office to design this as a presentation tool for investor meetings. Used Unity, Vuforia, and HLSL.

## 📄 PUBLICATIONS

**Adaptive 5G systems for interactive volumetric sports analysis in augmented reality**, *ACM MobiSys* 📄

2022

Received Best Demo Award at MobiSys 2022

**Characterizing real-time dense point cloud capture and streaming on mobile devices**,

*ACM HotEdgeVideo @ MobiCom* 📄

2021

**Coordinate: A Spreadsheet-Programmable Augmented Reality Framework for Immersive Map-Based Visualizations**, *IEEE AIVR* 📄

2019

## 🔧 TECHNICAL SKILLS

**Graphics Programming** (HLSL, C, C++, Graphics Pipeline, Linear Algebra)

**AR/VR Development** (Unity, ARKit, Oculus, Azure Kinect, Volumetric Video)

**Media Production** (Blender, Logic Pro, Illustrator, Photoshop, Final Cut Pro)