Aashiq Shaikh

AR/VR Graphics Developer

US Citizen | he/him | work@aashiqshaikh.com

Portfolio | LinkedIn | Github

PROFILE

AR/VR Application and Graphics Engineer with 5 years of experience building and publishing AR/VR applications. Excited about designing and developing visuals for immersive spatial experiences. Looking for full-time development positions in AR/VR graphics.

EDUCATION

Media Arts and Sciences, PhD, *Arizona State University*
2021 – present | Tempe, AZ
GPA: 3.97

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

EXPERIENCE

AR/VR Graduate Researcher, *Meteor Studio*
Jan 2020 – present | 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 historical narrative AR experience. I worked in the Unity engine and use HLSL and C#. Prototyped 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**).

REFERENCES

References available upon request.

PROJECTS

Volumetric Video Streaming
ongoing
Developing a pipeline for capturing, streaming, and rendering volumetric content in AR/VR. I specialize in the data representation and rendering components of the framework. Using Unity, .NET Core, HLSL, and Azure Kinect.

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.

CPU Ray Tracer Walkthrough
Developing a CPU ray tracer in C++ to validate my understanding of the graphics pipeline from the ground up and break down all the math involved.

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

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

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

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