Shashank Reddy Baradi

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Education

- **Arizona State University** — Tempe, AZ
  Master of Science in Computer Science; GPA: 3.80 — *Aug. 2021 – May. 2023*
- **IIITDM Kancheepuram** — Chennai, India
  Bachelor of Technology in Computer Engineering; GPA: 3.20 — *Aug. 2014 – July. 2018*

Experience

- **EdPlus at Arizona State University** — Tempe, AZ
  Extended Reality (XR) Developer — *Nov 2021 - Present*
  - Engineered efficient and reusable systems that power intricate game logic.
  - Collaborated with illustrators and engineers to implement new developments, help build features, and solve creative problems.
  - Built a 2D web app in Unity that is intended to replicate an authentic geo design workshop as part of the Geography Information Science (GIS451) course at Arizona State University. Used Mapbox API support to render real-time map data and authentically validate city planning for students. Wrote several surface shaders in Cg/HLSL and configured them for most optimized Unity settings.
  - Built a Virtual-Reality sailing simulation game in Unity-XR framework. Developed libraries to simulate the buoyancy forces of the water on canoes and built a physics-based hand interaction system. Hosted it on the Meta Quest store which has over 200 downloads.
  - Adept in AI, 3Cs, Animations, UI, Shader Graph, Debugging, Optimization, and Scriptable Render Pipeline
  - Built a 3D web app in Unity that is a biological simulation where a student learns about the genotypes of animals and how traits are mixed and passed from one animal to its offspring. This app is an integral part of the coursework for Animal Physiology (BIO360) at Arizona State University.
  - Developed an AR web application using ThreeJS that spawns a human-scale virtual booth. Users can walk around the booth with their mobile phones to explore and interact with various components, such as videos and images. This demo was presented at the ASU-GSV annual summit held in March 2022 and logged over 3,000+ views in two days.
  - Prototyped new interactions and features with an eye toward intuitive usability and feel.
  - Created a 3D portal AR experience for the iOS platform that fits within the context of an Elevator, such that the content inside the portal adjusts according to the movement of the Elevator. Used ARKit's native API support for SLAM tracking and altitude data.
  - Built a webAR marketing experience for rendering alien creatures in AR using threeJS and A-Frame engines. This experience was presented at the ASU-GSV summit held in March 2022 and logged over 2000+ views in 2 days.

Projects

- **VR Golf:** Developed a 3D golf game for the Quest platform using Unity. This game keeps track of the score, current level, and increases the difficulty as the user gains more experience in the game. Wrote Surface Shaders from scratch in Cg/HLSL for Quest VR with runtime editable patterns and configured for most optimized Unity3D settings.
- **Mario2D:** Developed an iOS game in Unity similar to "Nintendo-Mario" with multiple-level design and character animations. Hosted the application on the Apple Store, which has over 500 downloads.
- **AR Hologram:** Developed a marketing experience for generating holograms in AR from green screen videos using the A-Frame AR engine.
- **Mad Birds:** Developed a casual puzzle video game for the android platform in Unity with multiple level selections and character animations. Hosted it on the Google Play Store with over 200 downloads.
- **ImageTracking in AR:** Developed a marketing experience for image tracking in AR using the A-Frame AR engine

Skills

- **Programming**: C/C++, C#, GLSL, Java, HLSL, Swift, Python, SQL **Platforms**: Windows, Linux, OS X
- **Graphics**: 3D Math, Linear Algebra, PBR, Normal Mapping **Version Control**: GIT, SVN, Unity Collab
- **Software/Tools**: Unity3D, Maya, Blender, Unreal, AR Core, ARKit, 8th Wall, OpenGL, REST API, WindowsAPI, VS platform, XCode, Android Studio, Mono Develop