

ARUN KUMAR A R



Unity Developer

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Portfolios : [Unity Dev Portfolio](#)

ABOUT

I am a passionate and creative unity developer with 2+ years of experience in developing immersive and engaging games and applications for various platforms. I have worked on projects involving AR and VR. I am always eager to learn new things and explore new possibilities in game/application development. Visit [Unity Dev Portfolio](#) for showcase

EDUCATION

College of Engineering, Kottarakara

Bachelor's Degree in Computer Science & Engg.
2016 - 2020
CGPA - 7.4

SKILLS

- **Unity**
 - C# with OOP principles
 - Serialization and data management in using JSON.
 - Optimizing CPU and GPU usage, reducing draw calls, and managing memory.
 - knowledge of Delegates, events, and co-routines for managing asynchronous behavior.
 - Familiarity with Oculus Quest VR
 - Familiarity with AR Foundation.
 - Good knowledge in utilizing Unity's editor interface, scene management, scripting ,UI/UX management, shaders, animations, and particle system
 - Identifying and resolving performance bottlenecks in Unity projects.
 - Knowledge in Vfx and ShaderGraph
 - Knowledge in URP, Built-in and HDRP Rendering pipelines
 - Real time Lighting
 - Baked Lighting
 - Post Processing
 - Platforms - Android
 - iOS
 - Standalone Windows
 - Oculus Quest 2, Pro
 - WebGL
 - Mac

PROFESSIONAL EXPERIENCE

Unity Developer (3D and VR)

Tiltlabs Consultancy Services | Feb 2022 - Present

Projects

- **Honey Well (3 months)**

The software development project to develop Asset Bundles for VR Application of Petroleum plant. This includes implementation of Animations and plant equipment simulations to allow employees to interact with the facility.

As a developer , I was responsible for,

- Creating asset bundles, plant animations ,scene setup of plant for Honeywell VR Application Support designing and implementing the overall architecture for the Plant

- **MetaGP - Garage Experience (5 months)**

Meta-GP is an exciting garage experience project that lets users easily explore a variety of assets related to the thrilling world of motorsports. ranging from cars and bikes to helmets and garages,Meta-GP encapsulates the entire racing experience across a variety of platforms, including Windows, Android, Mac, WebGL, Oculus Quest 2 VR and iOS. This project allows enthusiasts to explore, interact with, and appreciate these assets in their full glory.

As a developer , I was responsible for,

- Creating first person charcter for moving inside Garage
- User login via JWT Token.
- Utilize Addressable Asset System to achieve effective and dynamic loading and management of assets via JWT Token.
- Information Card display and voice by interaction with assets
- Optimization for android and iOS
- VR Integration, Lighting and Post processing

- **Unreal Engine 4 & 5**

- Scene Management
- Animation

- **Blender**

- 3D Modelling
- 3D Model Optimization

- **Speed Tree**

- Tree Modelling and Optimization

- **Da Vinci Studio**

- Video, Audio Editing

- **Audacity**

- Audio Editing

- **MeshRoom**

- 3D Photogrammetry

SOURCE CONTROL

- Git

PROGRAMMING LANGUAGES

- C#
- C
- C++
- HTML
- CSS
- JS

LANGUAGES

- Malayalam
- English
- Hindi
- Japanese

- **KidZania TVS Bike Studio (3 months)**

The software development project to develop 3D simulation software for touch interactive kiosk that kids use to design and modify the TVS Apache RR310 motorbike in 3D using various tools and features available in the simulation software and take digital certificate at end of session.

As a developer , I was responsible for

- Application Management
- Develop Interactable UI
- Develop the core mechanics that allow kids to drag and drop Bike parts to Build Bike, paint colors and select stickers.
- Certificate Generation
- Recording session as video.
- creating a system that generates QR codes specifically for certificates. These QR codes could contain encoded session video.
- The generated certificate files are uploaded to Amazon S3, a cloud storage service provided by AWS.
- Users who possess the certificates can scan the QR code to retrieve the associated session video from Amazon S3.
- Scene Lighting, Post processing

- **KidZania Mahindra Lifespaces (6 months)**

The software development project to develop 3D simulation software for touch interactive kiosk that kids use to build a township with given buildings, amenities and trees respectively and take certificate at end of session.

As a developer , I was responsible for

- Develop the core mechanics that allow players to drag and drop buildings to the designated areas in the environment.
- Creating Application Management
- Develop Interactable UI
- Generation of name, score and date PNG image for printing above the preprinted certificate
- Land scape optimization for performance
- Scene Lighting, Post processing

- **GenRobotics VR Experience (1 month)**

The software development project to develop a oculus quest VR App that play VR video by a tcp socket network

As a developer , I was responsible for

- Develop the VR video playing mechanics Like Start, stop and videoplayback speed are controlled by a Socket Server.

- **Playaza Seesaw VR (POC) (3 weeks)**

The software development project to develop a oculus quest VR App that the user experiences seesaw like movement in an moving airplane that in the VR application. The seesaw like movement caused by the VR Headset the the user is wearing.

As a developer , I was responsible for

- Develop the moving airplane side rotation based on VR headset Rotation
- Develop the moving airplane ascending or descending based on VR headset up-down motion

- **Cricket VR Arcade - Ticket Printing App (1 month)**

The software development project to develop a ticket printing app for Cricket VR arcade that connect with a bluetooth printer to print name,email,phone,game,gamemode and ticketID in ticket. This application made for android platform

As a developer , I was responsible for,

- Develop Interactable UI
- Bluetooth printer plugin integration
- Overall Application flow
- Email validation,input validation, phone validation and ticketID generation

- **Cricket VR Arcade - Sever App (1 week)**

The software development project to develop a Server Dashboard app for Cricket VR arcade that connect and control VR Devices.

As a developer , I was responsible for,

- Develop Dashboard UI

- **Honey well Fluid Simulation AR Demo (2 week)**

The software development project to develop a fluid simulation that simulate in transparent pipe in AR .This application made for iPad OS

As a developer , I was responsible for,

- AR Setup using AR Foundation
- fluid simulation

- **Tiltverse (Present)**

The software development project to develop a metaverse plattform by tiltlabs. This application made for WebGL

As a developer , I was responsible for,

- VR integration
- Human anatomy model showcase

- **Emcode Union Boat (1 month)**

The software development project to develop kayak race simulation game of 5 including one player kayak and 4 AI kayaks. Player kayak drives based on a remote placed kayak machine. The software receives data from kayak machine by web socket and moves the Player kayak.Meters will be calculated in a time limit and display players in leaderboard based on the distance they have covered.

As a developer , I was responsible for,

- Starter Countdown and Session Countdown feature
- UI/UX, UI Animations
- Visual alert system to play sfx at specific time and display distance covered
- Distance Covered Calculation
- Scene Setup, Lighting, Post Processing
- SFX

- **Emcode Tug of War (1 Week)**

The software development project to develop Tug of War Simulation with 4 characters pull rope, where highest pull strength Wins

As a developer , I was responsible for,

- charcter Animations, UI/UX, UI Animations
- Rope physics

Unity Developer (3D and VR)

Embright Infotech | Mar 2021 - Jan 2022

Projects

- **VR Confined Space Training Simulation (POC)**

The software development project to develop a Confined space training simulation that teaches how to properly equip PPE and enter into the hazardous confined space in Ship. This application made for oculus Quest VR

As a developer , I was responsible for,

- Application Management
- Personal protective equipment(PPE) management
- Scene Setup
- Implement scenarios where entering confined space with or without equipping certain items
- VR Integration

- **VR Laser/Light Reflection Simulation (POC)**

The software development project to develop a Laser/Light Reflection Simulation that user able to switch laser or light on different surfaces like mirror, wood and metal in oculus Quest VR

As a developer , I was responsible for,

- Develop Laser reflection by mirror, wood and metal using Line renderer
- Develop Light Reflection by Mirror, wood and metal using particle systems

- **ULCC Archviz**

The software development project that lets users easily explore interior archviz visualization of ULCC Building.

As a developer , I was responsible for,

- Interior Lighting of Main Hall

- **Auticare**

The software development project that Contains VR educational scenarios for children with ASD.

As a developer , I was responsible for,

- Scene Setup and Interior Lighting of Scenarios

- **Alphabet Arrangement App**

The Educational Mobile application that let kids learn alphabets and words by drag each UI cloth button to slots present in alphabet silhouette and reveal correspond 3D assets then gets scored if kids arrange alphabets of words properly.

As a developer , I was responsible for,

- Scene Setup.
- Application Management
- Revealed 3D asset touch rotation interaction
- Drag and drop UI buttons functionality