BURGS Weekly Presentation

Broadening Undergraduate Research Groups

9/12/2025

Allie, Casie, Gayatri, Kim



Unity Application - Progress

Eye Tracking Privacy Notice

Minimize your permission requests a -

your apps. This helps users discover and use high-quality apps that provide a safe and secure user environment.

you declare a new permission, you must review how your app requests and shares user data. Some particularly sensitive permissions and APIs require you to provide in-app disclosure of your data access, collection, use, and

Call APIs which allow your app to perform the desired functionality without declaring permissions.
 Invoke specific intents or event handlers to perform functionality, instead of declaring permissions.

. The system provides built-in contracts for different file operations and also supports custom contracts

from users interrupts the user flow, and users can deny your request. In addition, each time

Effective September 5, 2025

Eye Tracking Function

What Data Is Colle

Gathering Resources

- Library VR Consulting emailing
- Resources from the lab
 - GitLab
- Figuring out which Meta Quest Pro to use -> Ibrahim's?
- Looked into some

policies



Consultants

Set Up

- Added account to the other computer
- Set up all applications on the other computer
 - Meta Quest Link
- Went over previous work
- Created a plan
 - Try Unity tutorials from resources
 - Look into programming eye tracking

Resources/Articles

- Android Minimize Permission Use
- Eye Tracking for Movement SDK for Unity
- Submitting App Requirements
- <u>Privacy Policy Requirements</u>

BURGS

Created slides
 presentation introducing
 project

New members, please feel free to reach out to anyone in the lab if you need help! We're all cool people who don't mind lending a hand $\ensuremath{\mathfrak{Q}}$

Meta Interaction SDK

Ray Interactions

<u>Video Tutorial on Ray Interactions</u> (outdated but can start as a basis)

<u>Video Tutorial on Ray Interactions</u> (I recently referenced this one)

<u>Video Tutorial on NPC Movement</u> (I recently used this one too)

Nav Mesh

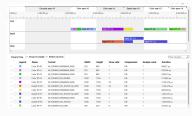
Upload Unity Project to GitLab DO THIS WHEN

YOU START DEVVING

My Materials in Unity are Pink

Next Step: Exploring Other Profilers

Allie, Gayatri



01

Radeon GPU

Successful installation and connection to headset, gathered a few sets of frame-based GPU/hardware data. Are considering dropping this profiler for the following reasons: difficult/no way to export, not time-series format, hard to analyze.



02

Performance Profiler

Provide performance statistics compatible with the headset itself and with Unity. Can export into a CSV format. Latency timing, application render timing, compositor render timing, etc.



03

PICO XR

Provides time stamped performance reports on the following metrics: FPS, MTP, compositor GPU time, GPU utilization, GPU bus busy percentage, shaders busy percentage, time shading vertices percentage, etc.

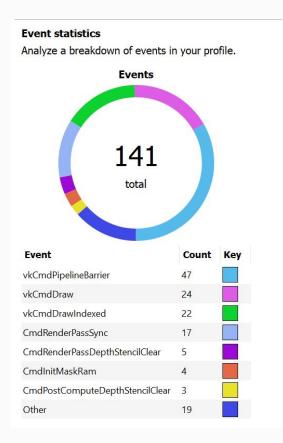


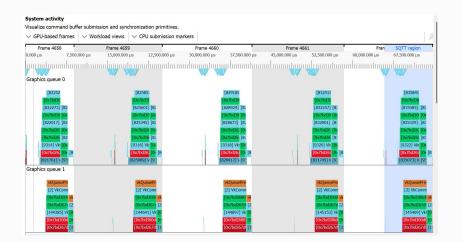
04

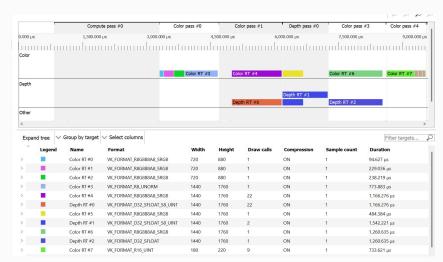
In-Unity Profiler

Replicate what Casie did by running scanning applications within Unity and utilizing the in-house profiler that Unity provides. Focuses on CPU usage, rendering, memory, audio, physics, and animation.

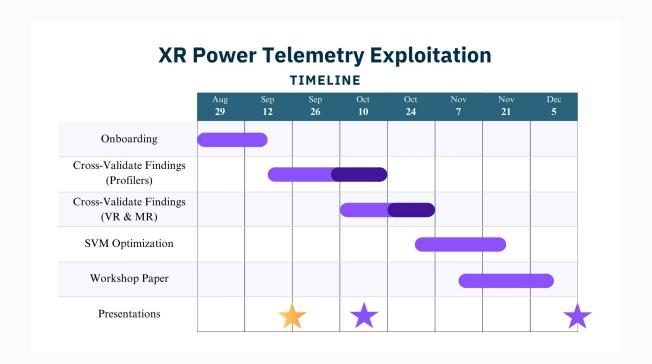
Radeon GPU Profiler







Project name timeline



Questions

1. We were told a grad student in PrivateEye made a profiler in Unity, how can we reach out to him?