THE GAME ENGINE REVOLUTION

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FULL-CYCLE INTERACTIVE CONTENT PRODUCTION
STUDIO FOR ENTERPRISE, BRANDS, AND STUDIOS

Games & Immersive Experiences
- VR & AR
- Video game design & development
- Interactive experiences using Unreal Engine & Unity

Engineering
- Full-solution development from server-side to client
- Complex cross-platform development & team augmentation

Virtual Production
- LED wall content built and operated in Unreal Engine
- Previs & techvis for shot planning and blocking
- Pipeline Deployment and Infrastructure setup

Digital Humans
- Photorealistic digital human photogrammetry reconstruction
- Game engine-ready assets
- Live driving through facial and body capture

Art Asset Creation
- 3D and 2D art asset creation, optimized for game engines
- Technical art & FX
- From stylized to photorealistic
THE GAME ENGINE REVOLUTION

AR/VR | VIRTUAL PRODUCTION | EVENTS
WHAT IS A GAME ENGINE?

- Toolkit for creating an experience that is
  - Rendered in real-time
  - Interactive
  - Often 3D
- Toolkit automates a lot of low-level programming so you can focus on features
- Originally used just for games, now expanded to include much more
Go-to engine for mobile games and Augmented Reality
- Lightweight, runs well on many different types of devices
- Huge amount of pre-made toolkits and assets available on the Unity Asset Store
Augmented Reality: taking the world around us, and placing a virtual layer on top of it. Requires sensing devices like a camera, LiDAR, and the ability to interpret this data through software (computer vision). Apple has fully committed to AR. Transition from phone AR to wearable.

- Rendered in real-time
- Interactive
- 3D
UNITY - AUGMENTED REALITY

Games
Training
Medical
Marketing
Education
Productivity
Created by Epic Games

- Excellent out of the box lighting and rendering (most capable of reaching photorealistic quality)
- Built-in cinematic tools
- Rapidly expanding toolset
- Great for VR & Virtual Production
Tech has reached the point where photorealistic (or high-quality stylized) real-time rendering is possible, and Unreal Engine is leading the charge on this.

Pre-rendered photorealistic scenes have been done for a while, i.e. film VFX.

But why is being able to do this LIVE important?

- Rendered in real-time
- Interactive
- 3D
Why is it better than green screen?
● Emissive lighting, reflections
● Camera frustum
● Live lighting, scene changes, scouting, and more
● It can be a green screen too

Mandalorian
● Over half the shots from season 1 were shot in the LED volume
● LED wall final pixel shot percentage will increase more as the tech continues to mature
UNREAL - LIVE ANIMATED CONTENT

Totally virtual live events
- John Legend
- Live-driven virtual avatar
- Chatted with the crowd, showed donations, etc.
UNREAL - LIVE ANIMATED CONTENT
UNREAL - LIVE COMPOSITING

Real camera footage combined with virtual scenes and virtual VFX (live compositing)

- Tomorrowland
- Weather Channel Typhoon
- League of Legends
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TECH GETTING BETTER BY THE DAY

Even better visuals and more tools are coming:

- More and more final pixel shots in camera as photorealism becomes common
- More and more tasks can be done without going to external programs
- Game Engines to remain a staple across industries
- Bringing people together in a post-COVID world
WHAT DO YOU NEED?

- Pipeline & Toolkit
- Trained people
- An adventurous idea

Questions?

https://tinyurl.com/icvrfollowup