

The background is a vibrant digital illustration of a city skyline at sunset or sunrise. The sky is a gradient of orange, yellow, and blue. Several tall skyscrapers are visible, some with glowing windows. A large, stylized white logo resembling a 'G' or a stylized building is positioned at the top center. In the foreground, there are two circular insets. The left inset shows a close-up of a plant with reddish-brown leaves and green stems growing from a purple base. The right inset shows a dark, silhouetted landscape with a large, dark, angular shape, possibly a building or a rock formation, set against a lighter background. The overall scene is a blend of natural and architectural elements, rendered in a high-tech, digital style.

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## VULKAN RAY TRACING WITH DYNAMIC RENDERING

The Vulkan logo consists of a white, stylized, curved shape resembling a 'V' or a swoosh, followed by the word 'Vulkan' in a bold, sans-serif font. A registered trademark symbol (®) is located to the right of the word.

**Vulkan**®

JOSE EMILIO MUNOZ-LOPEZ (ARM)  
STEVE WINSTON (HOLOCHIP)





- All the content will soon be available as part of Khronos' Vulkan Tutorial
  - <https://github.com/KhronosGroup/Vulkan-Tutorial>
- In the meantime, you may access the content presented today in this Pull Request
  - <https://github.com/KhronosGroup/Vulkan-Tutorial/pull/145>





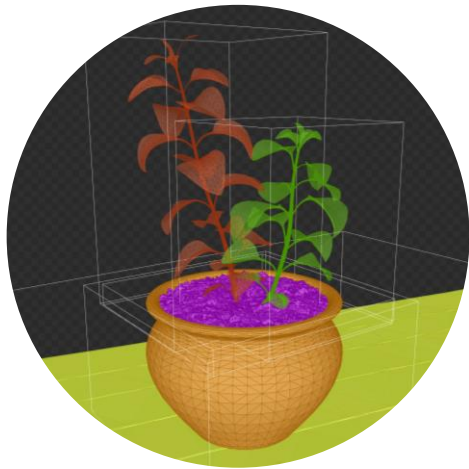
[attachments/38\\_ray\\_tracing.cpp](#)



[attachments/38\\_ray\\_tracing.slang](#)



Dynamic rendering



Acceleration  
structures



Ray query shadows  
and animations



Bindless resources  
and transparency



Ray query  
reflections

# BUILD AND RUN!



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Re-build and Run!

Use

```
#define LAB_TASK_LEVEL 4
```



```
cmake --build build --target 38_ray_tracing --parallel
```

```
start .\build\38_ray_tracing\Debug\38_ray_tracing.exe -wo .\build\38_ray_tracing\
```



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# CODING TIME

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- Complete the full Vulkan Tutorial at <https://github.com/KhronosGroup/Vulkan-Tutorial>
- Find more Vulkan documentation and resources at <https://www.khronos.org/vulkan>
- Read Arm's Vulkan Best Practice guide at <https://developer.arm.com/mobile-graphics-and-gaming/vulkan-api-best-practices-on-arm-gpus>
- Download RenderDoc at <https://github.com/baldurk/renderdoc>
- Download NVIDIA Nsight Graphics at <https://developer.nvidia.com/nsight-graphics>
- Learn more about the Slang shading language at <https://shader-slang.org>

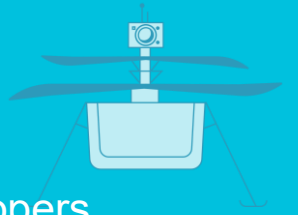


# arm Developer Program

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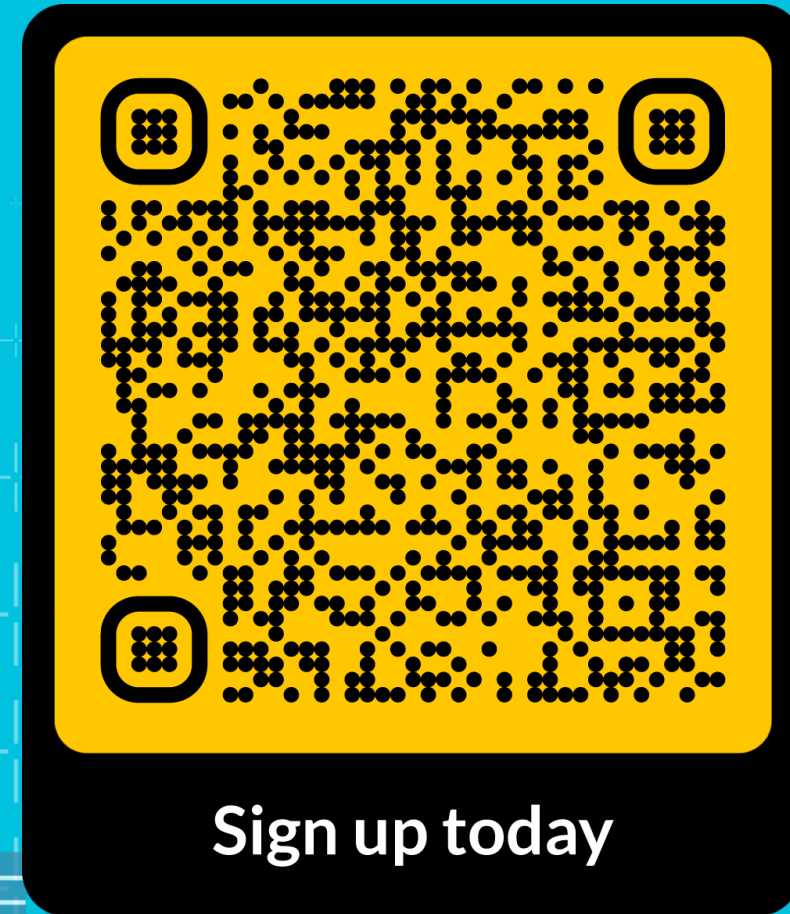
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# THANK YOU!



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