

# Minseo Park

Lead Developer, 61315 Inc.  
Seoul, Republic of Korea  
studio61315@gmail.com & <https://minseopark.vercel.app>

## RESEARCH INTERESTS

---

- Creating physically plausible imagery employing computer graphics technology. My research interests include physically-based modeling, high-performance computing structures for massively parallel settings, and the orchestration of real-time rendering techniques.

## PROFESSIONAL EXPERIENCES

---

2019 ~ Present	<b>Lead Developer · CTO</b> 61315 Inc.	Seoul, Republic of Korea
	Real-time computer graphics applications	
2018 ~ 2019	<b>Software Engineer</b> Imagineers co.	Seoul, Republic of Korea
	Cross-platform rendering engine for mobile devices	
2014 ~ 2018	<b>Game Developer</b> FTM Game Creators Club	Seoul, Republic of Korea
	Indie game development & Rendering pipeline optimization	

## EDUCATION

---

2013 ~ 2021	<b>Sungkyunkwan University</b> Department of Film, TV and Multimedia	Seoul, Republic of Korea
	<i>B.A. in Film, TV and Multimedia</i>	

## RESEARCH AND DEVELOPMENT PROJECTS

---

- **Real-time position based dynamics on web browser, (2021)**
  - Lead Developer · Commissioned by [Lolozem Inc.](#)
  - Simulation and rendering of rope-like bodies in an augmented reality environment
    - Cross compile C++ source to WebAssembly binary using emscripten
    - Near native performance on the browser runtime
    - Physics engine runs on many different platforms
    - Emscripten · WebAssembly · WebGL

- [Supplementary \(mp4 · 2 MiB\) - https://t.ly/7zKj](https://t.ly/7zKj)
- **Real-time rendering engine for hologram-like human figures**, (2020 ~ 2021)
  - Lead Developer · Commissioned by [Cultural Heritage Administration](#)
  - Rendering of continuously captured 3D human figures recorded in mesh data
    - Implement streaming algorithm to handle resource-demanding assets
    - Minimize context switching via render pipeline optimization
    - Implement hardware acceleration using SIMD intrinsics
    - OpenGL ES · GPU Instancing · SIMD Intrinsics
    - [Supplementary \(gif · 4 MiB\) - https://t.ly/LV-p](https://t.ly/LV-p)
- **Real-time physically-based-rendering on mobile devices**, (2019 ~ 2020)
  - Lead Developer · Commissioned by [Imagineers co.](#)
  - Creating a digital duplicate of merchants in an augmented reality environment
    - Approximate global illumination, using physical BRDF and image based lighting
    - Disney PBR · Metal · OpenGL ES · glTF
    - [Supplementary \(gif · 4 MiB\) - https://t.ly/-JL2](https://t.ly/-JL2)
- **"dr0plet", IGF 2016 Student Entrant**, (2015)
  - Game Developer
  - Game Developers Conference, United States
    - 2D Ray Tracing
    - <https://igf.com/dr0plet>
- **"Star Sailor", IGF 2015 Student Entrant**, (2014)
  - Programmer
  - Game Developers Conference, United States
    - Deferred Lighting · Vertex Skinning · Software Instancing
    - <https://igf.com/star-sailor>

## SKILLS AND TECHNIQUES

---

- Techniques
  - Ray/Path tracing · Ray marching · Marching cubes · SDF · BVH · Spatial Hashing · PIC/FLIP
- Languages & APIs
  - ANSI C · Modern C++ · OpenGL · GLSL · Vulkan · WebGL · webGPU · SPIR-V
- Tools
  - GNU Make · CMake · Valgrind · RenderDoc · OpenVDB · glTF · USDZ

## MILITARY SERVICE

---

- Army Corporal at Eighth United States Army, United States, (2015 ~ 2017)  
(Korean Augmentation To the United States Army)

## REFERENCES

---

1. Prof. Lee, Jun Hee

School of Art, Sungkyunkwan University  
+82 2-760-0664  
junheele@skku.edu

2. **Prof. Cho, Young Sang**  
School of Art, Sungkyunkwan University  
+82 10-3422-1979  
jowall@skku.edu