Kyu Yeon "James" Lee

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Education

MS, Computer Science Present   April 2026
Georgia Institute of Technology   Atlanta, GA USA

BS with Honors, Computer Science and Engineering, Mathematics   February 2020
Sogang University   Seoul, Republic of Korea

Experience

Graduate Research Assistant   January 2025 – Present
Georgia Institute of Technology   Atlanta, GA USA

- Center for Research into Novel Compute Hierarchies (CRNCH)
- Maintained CRNCH Rogues Gallery, testbed of next-generation hardware.

Engineer   February 2024 – July 2024
Samsung Electronics   Hwaseong, Republic of Korea

- Developed Vulkan drivers, addressing rendering artifacts and gaming performance issues.
- Designed and implemented workload-aware optimizations in AMD PAL user-mode drivers.

Engineer (Samsung Talent Exchange Program)   November 2022 – January 2024
Samsung SARC/ACL   San Jose, CA USA

- Optimized GPU performance through workload and job dependency analysis.
- Enhanced Vulkan render passes with architectural support for memory bandwidth reduction.
- Designed workload-aware DVFS policies for power optimization and integrated RDNA3 features.
- Improved driver architecture by designing a profiling interface and implementing sandbox infrastructure.

Engineer   March 2020 – October 2022
Samsung Electronics   Hwaseong, Republic of Korea

- Developed GPU profiler/debugger, focusing on performance counters and daemon enhancements.
- Developed production software including GLES extensions for ANGLE and silicon screening tools.
- Optimized mobile gaming performance using DVFS and cache policy tuning
- Resolved production issues related to graphics and compute performance.

Skills

Programming Languages/APIs: C, C++, Python, Vulkan, OpenGL ES, OpenCL, CUDA, Pytorch, Triton

Tools: NSight, Android GPU Debugger, RenderDoc, Perfetto, Systrace