Kyu Yeon “James” Lee

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MS student at Georgia Institute of Technology. Experienced software developer with 4+ years specializing in GPU drivers, system profiling, and software/hardware co-optimization. Adept at GPU architectural optimization and test vector development for silicon validation and fault screening. Broadly interested in GPU related software development including hardware architecture modeling, system software, and API development.

Education

- **Georgia Institute of Technology (Atlanta, GA, USA), 2024 ~ present**
  - MS in Computer Science, College of Computing **(**Specialization: Machine Learning)

- **Sogang University (Seoul, South Korea), 2014 ~ 2020, 92.6/100 (Magna Cum Laude)**
  - BS in Computer Science Engineering
  - BS in Mathematics

Work Experience

- **Engineer, Samsung Electronics (S.LSI Business) Hwaseong, South Korea: February 2024 ~ July 2024**
  - Vulkan Driver Development
    - Production issue analysis/debugging – rendering artifacts, gaming performance, etc.
    - Workload aware optimization in user mode driver

- **Engineer, Samsung Austin Semiconductor (SARC-ACL) San Jose, CA: November 2022 ~ January 2024**
  - GPU Performance Optimization
    - Vulkan workload and job dependency analysis
    - Architectural support for Vulkan render passes including tile rendering and memsystem optimization.
    - Workload-aware power optimization DVFS policies
  - Driver Architecture Improvement
    - GPU user mode driver profiling interface design
    - Sandbox infrastructure for GPU driver development

- **Engineer, Samsung Electronics (S.LSI Business) Hwaseong, South Korea: March 2020 ~ October 2022**
  - SDK/DevTools Development
    - GPU profiler/debugger support – performance counters analysis
    - Internal development tools – profiler daemon enhancement
  - GPU Software Development
    - OpenGL ES (GLES) driver extension development for ANGLE
    - Silicon screening infrastructure – test vector development for silicon validation
    - Production issue analysis/debugging – graphics and compute performance, etc.
    - Mobile gaming performance analysis and optimization – DVFS, cache policy tuning

Skills

- **Programming Languages/APIs**
  - C++, Python, bash, powershell
  - Vulkan, OpenGL ES, OpenCL, CUDA
  - Pytorch,

Projects

- **Production**
  - AMD Platform Abstraction Layer, cmdbuffer and perfexperiment
  - Google ANGLE, Vulkan backend

Experiences

- **Presentations**
  - Booth duty for Exynos 2400 at CES 2024, presented to VIP visitors
  - Booth duty for Exynos 2400 at S.LSI Tech Day 2023, presented to VIP visitors