Gergely Mészáros

GPU and compiler engineer.
Open Source contributor.

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Experience

2024–Present   **Compiler Staff Engineer**, *Intel*, Gdańsk (Poland)
Development and bug fixing on the oneAPI DPC++ Compiler, Intel's LLVM-based C++/SYCL compiler for CPUs and GPUs.
Key contributions:
- Fixed Windows self-hosting breakage by authoring RFCs and patches in CMake and LLVM, coordinating with internal stakeholders
- Driving SYCL enablement for next-generation Intel GPU, debugging issues spanning Clang frontend, LLVM backend, GPU runtime and architectural simulator, coordinating fixes across teams
- Contributing to X86 backend optimization and code-generation (optimization passes, SelectionDAG), including technical guidance for junior engineers.

2021–2024   **Software Performance Engineer**, *Stream HPC*, Budapest (Hungary)
Core contributor to AMD ROCm GPU libraries (rocPRIM, hipCUB, rocRAND), shipping across ROCm 5.0–6.4.
Implemented GPU primitives for AI and scientific computing.
Optimized GPU applications across AMD, NVIDIA, and Apple Silicon platforms for HPC and ML workloads.

2019–2021   **Junior C++ developer**, *Siemens Mobility*, Budapest (Hungary)
Development for a metro control system deployed worldwide.

2018–2019   **C++ developer intern**, *Graphisoft*, Budapest (Hungary)

Education

2019–2021   **Computer Science MSc**, *Eötvös Lóránd University*, Budapest, *Outstanding*
Specialization in numerical methods and computer architecture.
Thesis: *Robust generation of Signed Distance Fields* - GPU-accelerated SDF generation using the Vulkan API

2016–2019   **Computer Science BSc**, *Eötvös Lóránd University*, Budapest, *Outstanding*
Thesis: *3D Modeling of Water Surfaces* - Real-time water simulation and rendering on the GPU with OpenGL and C++

Technologies

C++, LLVM, CUDA, SYCL, Git, Python, CMake, x86 Assembly