2018 Research Interest/Project Ideas

Tiark Rompf
tiarkrompf.github.io

=====================================================================  

DeltaFlare: Native Compilation for Realtime Stream Processing

In recent work, we have developed an accelerator back-end for Apache Spark that delivers 10x-100x speedups on batch workloads, thanks to native code generation and architecture-aware optimizations (https://arxiv.org/abs/1703.08219).
In this project, we plan to extend the technique to streaming workloads and incremental query processing, reaping similar benefits for interactive and realtime processing. A key use case will be processing financial data feeds.