Graph analytics on RISC-V GPU

Where are the bottlenecks?

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Aim

Benchmarking and analyzing **Graph Analytics** throughput on a RISC-V GPU

Social networks  Road networks

Drug molecules  Biological networks

Real-world graphs

Conclusions

- Graph analytics throughput does not scale with more parallel hardware threads in GPU
- GPU memory hierarchy remains underutilized due to irregular memory requests
- **Future work**: Upgrade the memory hierarchy to minimize the impact of irregular requests