Hyunmo Sung

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Research interest

Optimization GPU programming Parallel algorithm

Technical Skills

C/C++ CUDA CMAKE Multi-threading

Language skills

Native korean English(TOFEL 92)

Education

M.S in computer science Under Dr.Bernd Burgstaller, Yonsei University, Seoul, Korea 2020-

B.A in computer science, Yonsei University, Seoul, Korea 2016-2020

B.A in Multimedia engineering, Dongguk University, Seoul, Korea 2014-2016

Career

Researcher, ELC, Yonsei University, Seoul, Korea 2020.02-

Internship, ELC, Yonsei University, Seoul, Korea 2019.07-2020.02

Internship, RiseGroup, Dongguk University, Seoul, Korea 2014.12-2015.02

Research Experience

Joint Research Project with DS Division of Samsung Inc. through Yonsei-Samsung Semiconductor Research Center (YSSRC) Program, ELC, Yonsei University, SAMSUNG, Seoul, Korea 2020.09-Today

Honors and Awards

2019.12.06 **1st place(최우수상)**, Capstone project, Lazy Parallel Kronecker Algebra, Yonsei University, Seoul, Korea

2019.05.13 **1st place(최우수상)**, Capstone project, Projection-Based AR Evacuation Simulator using Kinect for Windows V2, Yonsei University, Seoul, Korea

2015.07.09 **Honored Student Prize(학기 우등생)**, Dongguk University, Seoul, Korea

2015.01.09 **Honored Student Prize(학기 우등생)**, Dongguk University, Seoul, Korea

2014.07.07 **Honored Student Prize(학기 우등생)**, Dongguk University, Seoul, Korea

Funds and Scholarship

Graduate Student Research Assistant(재학조교장학금), 3416K KRW(about 2729 USD), Yonsei University, Seoul, Korea, 2021.Winter

Teaching Assistant scholarship(재학조교장학금), 1800K KRW(about 1438 USD), Yonsei University, Seoul, Korea, 2021.Winter

Teaching Assistant scholarship(재학조교장학금), 1800K KRW(about 1438 USD), Yonsei University, Seoul, Korea, 2021.Spring

Graduate Student Research Assistant(재학조교장학금), 3625K KRW(about 2896 USD), Yonsei University, Seoul, Korea, 2021.Spring

Internal Scholarship(계절학기조교장학금), 748K KRW(about 598 USD), Yonsei University, Seoul, Korea, 2020.Winter

Graduate Student Research Assistant(재학조교장학금), 3416K KRW(about 2729 USD), Yonsei University, Seoul, Korea, 2020.Autumn

Teaching Assistant scholarship(재학조교장학금), 1800K KRW(about 1438 USD), Yonsei University, Seoul, Korea, 2020.Autumn

Fund scholarship(고등교육혁신팀사회혁신활동장학금(연구지원)), 2000K KRW(about 1598 USD), Yonsei University, Seoul, Korea, 2020.Autumn

Graduate Student Research Assistant(재학조교장학금), 3416K KRW(about 2729 USD), Yonsei University, Seoul, Korea, 2020.Spring

Merit Scholarship(Academic)(성적우수장학(학비감면)), 1374K KRW(about 1098 USD), Dongguk University, Seoul, Korea, 2015.Autumn

A-Grade(전공(학과)수석장학), 3206K KRW(about 2561 USD), Dongguk University, Seoul, Korea, 2014.Autumn

Teaching experience

Computer Programming(CAC1100-01), TA, Yonsei University, Seoul, Korea, 2022 Spring

Compiler Design(CSI4104-01), TA, Yonsei University, Seoul, Korea, 2021 Autumn

SW Programming(YCS1002-11/12/13), TA, Yonsei University, Seoul, Korea, 2021 Autumn

Computer Programming(CSI2100-01), TA, Yonsei University, Seoul, Korea, 2021 Spring

SW Programming(YCS1002-11/12/13), TA, Yonsei University, Seoul, Korea, 2021 Spring

SW Programming(YCS1002-01), TA, Yonsei University, Seoul, Korea, 2020 Winter

Computational Thinking and SW Programming(YCS1001-04), TA, Yonsei University, Seoul, Korea, 2020 Autumn

Computer Programming(CSI2100-01), TA, Yonsei University, Seoul, Korea, 2020 Spring

Side projects

Set Drawing Language

Drawing a venn diagram isn't that hard. However, drawing a venn diagram from a formula is complex. Therefore, this project supports a language that can draw how venn diagram looks like. This project was made for 3 set but it can be extended to more sets.

GPU accelerator for Large Cellular Automata

Cellular automata is a typical programming model that can easily applied to the GPU. However, it is a bit complex to be offloaded to the GPU for a large scale. Therefore, this project suggests a new methodology to apply tiled map for a celluluar automata like algorithms. It is shown to have speed-up in comparison with original method depending on the tile size.

Projection-Based AR Evacuation Simulator

Trying an evacuation simulation is complex. To make it simpler and quicker, this project suggests an application that use AR technique to do experiments fast. This project doesn't use keyboard and mouse to use simulator but uses a projector and depth camera to interact with simulator. It's much more easiler to try situation.

Sort attack

Finding a bad input is a hard task for any algorithm. It sometimes can be proven by mathematics. However, there are some cases that is hard to be proven. Therefore, this project tried a worst case serach for a sorting algorithm.