

0.1 Revist the Supernodal Floyd Warshall algorithm November 2023 - December 2023

Side project

Implemented the Supernodal Floyd-Warshall algorithm from the paper <https://dl.acm.org/doi/10.1145/3555555.3555556>

78 times faster than a Floyd-Warshall algorithm with a single thread.

17 times faster than a Floyd-Warshall algorithm with multiple threads with other optimization techniques.

Utilized entire threads with OpenMP.

Source is open on the github repository <https://github.com/programelot/Supernodal-Floyd-Warshall>

0.2 Matrix multiplication on GPU July 2022 - September 2022

Side project

Developed 11 matrix multiplication algorithms on CPU and GPU.

Estimated and compared performance of each algorithms.

Utilized the shared memory on GPU.

Implemented Strassen's algorithm and Winograd's algorithm.

Source is open on the github repository <https://github.com/programelot/MatrixMultiplication>

0.3 BackRomii July 2022

Indie Game Development

Developed an escape game from auto generated maze with first person view.

- Used recursive division method to generate maze.

Optimized the game by developing an off culling algorithm.

Developed a path finding algorithm.

Developed in two weeks like game jam.

Game has been released on the web. <https://aintmos.itch.io/backromii>

1162 views and 292 downloads happened.