PRESENTATION OUTLINE: GPU Parallelization of Genetic Algorithms

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1 Project Introduction

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3 What is a Genetic Algorithm

- Encoding
- Initialization
- Evaluation
- Reproduction (Selection, Crossover, Mutation)

4 01 Knapsack Problem

- Explanation

5 Initial CPU and Multi-Core Versions

- Overview of implementation and multi core one liner

6 A first pass at GPU parallelization

- Translation from CPU code to Kernels
- Problem areas
- Speed-up Results

7 Better leveraging the GPU and improving the GA

- Fixing problem areas
- Speed-up results

8 Contrasts to other GA GPU papers

- What did I do differently from other papers?
- Was it better?

9 Takeaways

- My overall thoughts

References