younesnejahi

about

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languages

English
Farsi

programming

♥ C/C++, Python
CUDA, MPI, OpenMP
Bash, PHP, JavaScript
Matlab, Swift, OpenCL

web and markups

HTML, HTML5, AJAX
MySQL, CSS, CSS3
LaTeX, Markdown

tools

NVIDIA NSight Systems/Compute, Git, Docker, Kubernetes, AWS, Jupyter, SVN, Grace

miscellaneous

strong verbal and written communcation skills, excellent troubleshooting and debugging skills, exceptional problem solving skills, great team skills

I am a motivated, enthusiastic, detailed-oriented, and committed engineer. I have 5 years experience in developing and maintaining open source project (GOMC), which I learned how to communicate, document, design, program, and automatically test.

experience

2014-Now **Graduate Research Assistant** — Wayne State University

Collaborated with 9 more students to develop the fastest Monte Carlo simulation engine (GOMC) equipped with OpenMP and CUDA to fully utilize multi-core and heterogeneous architectures. My contributions:

- Profiled, ported the bottleneck of GOMC to GPU which improved the performance by up to 100x.
- Additional 16x speed-up gained on 2020 SDSC/NVIDIA GPU hackathon.
- Developed automated testing suite and reduced testing time from 1 week to 1 day.
- Moved project from SVN to GitHub, added CircleCI, documentation repository, and slack channel for more clear communication.

Web Developer
https://shgsilica.eng.wayne.edu/ & http://jetscape.org/

education

2014-2020 **Ph.D.** Doctor of Philosophy — Wayne State University
Majoring in Computer Science

2013-2014 **M.Sc.** Master of Science — Wayne State University
Majoring in Computer Science

2007–2012 **B.Sc.** Bachelor of Science — Isfahan University of Technology
Majoring in Computer Science

projects

GOMC **GPU-Optimized Monte Carlo**
Open-source software for simulating molecular systems using the Metropolis Monte Carlo algorithm.

PSO-GOF **Particle Swarm Optimization - Gibbs Optimization of force field**
Fully automated optimization tool written in Python/MPI scaled to hundred of nodes.

Stencil-GPU **Stencil computation implemented on GPU utilizing Warp Shuffle technology**
Improved stencil computation by factor of 1.8X compared to previous fastest implementation.

awards and honors

Mar 2018 **Outstanding Graduate Research Award** — Detroit, MI

2009 & 2010 **Honorable Mention at Regional Contest of ACM-ICPC, West Asia Site** — Tehran, Iran