



Keith Rutkowski

Computer Scientist

Contact

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906-458-2656

Languages

Julia ●●●●●●
C/C++ ●●●●●●
Python ●●●●○
Go ●●●●○
R ●●○○○
Fortran ●●○○○

Technology

Docker & Singularity ●●●●●●
Linux Kernel Dev. ●●●●○
GPU Graphics ●●●●○
GPU Computing ●●●●●●
Parallel Computing ●●●●●●
Modern Web ●●○○○
Graph Database ●●●●●●
Relational Database ●●●●○

Certifications

> CompTIA Security+

References

> Tony Dupont
acdupont@mtu.edu
> Brent Halonen
brent@lauriumlabs.com

Experience

Owner / Chief Computer Scientist

2019

Analytech Solutions, LLC

- > Provide innovative research and development, modeling and simulation, data analysis, and software/computing services.

Manager of Scientific Computing

2016-2019

Signature Research, Inc.

- > Developed new corporate modeling and simulation capabilities by obtaining and leading two \$1 mil. software development efforts.
- > Contributed to proposal development increasing revenue for the company and requiring the software development team to double in size.
- > Instituted the company's software development policies, including:
 - > Agile (Kanban) development, > code review and quality assurance, > documentation process, and > test and release management.
- > Designed innovative Linux-based HW/SW solutions.
- > Managed the scientific computing infrastructure:
 - > version control and issue tracking, > utilization of compute clusters, > Docker services frameworks, and > continuous integration system.

Senior Software Engineer

2009-2016

Signature Research, Inc.

- > Led numerous software development efforts, including:
 - > a high-performance and high resolution terrain thermal model, and
 - > the next-generation multi-spectral terrain modeling framework to support synthetic simulation in both heat and radiative transfer.
- > Co-invented a weigh-in-motion scale (US patent [US8736458 B2](#)).
- > Garnered funding of a \$2 mil. high-performance, GPU-based computing cluster for real-time ray-trace rendering.
- > Developed and demonstrated an industry first real-time ray-trace thermal rendering system.

Teaching Assistant

2005-2008

Michigan Technological University

- > Taught 10 semesters of "Software Development with C/C++" courses.

Education

Ph.D. Candidate in Computer Science

2007-2008

Michigan Technological University

- > Researched Human-Computer Interaction focusing on muscle memory-based performance enhancements and methods of data interaction.

M.S. in Computer Science

2005-2007

Michigan Technological University

- > Developer of the pirate-themed game engine used in the first ever BonzAI Brawl AI programming competition.

B.S in Computer Science

1999-2003

Northern Michigan University

- > Researched and presented work in embedded, real-time Linux-driven robotics at Argonne National Laboratory's Undergraduate Symposium.