



OpenCL in Action: How to Accelerate Graphics and Computations

Matthew Scarpino

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Summary

OpenCL in Action is a thorough, hands-on presentation of OpenCL, with an eye toward showing developers how to build high-performance applications of their own. It begins by presenting the core concepts behind OpenCL, including vector computing, parallel programming, and multi-threaded operations, and then guides you step-by-step from simple data structures to complex functions.

About the Technology

Whatever system you have, it probably has more raw processing power than you're using. OpenCL is a high-performance programming language that maximizes computational power by executing on CPUs, graphics processors, and other number-crunching devices. It's perfect for speed-sensitive tasks like vector computing, matrix operations, and graphics acceleration.

About this Book

OpenCL in Action blends the theory of parallel computing with the practical reality of building high-performance applications using OpenCL. It first guides you through the fundamental data structures in an intuitive manner. Then, it explains techniques for high-speed sorting, image processing, matrix operations, and fast Fourier transform. The book concludes with a deep look at the all-important subject of graphics acceleration. Numerous challenging examples give you different ways to experiment with working code.

A background in C or C++ is helpful, but no prior exposure to OpenCL is needed.

Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book.

What's Inside

- Learn OpenCL step by step
- Tons of annotated code
- Tested algorithms for maximum performance

Table of Contents

1. Introducing OpenCL
2. Host programming: fundamental data structures
3. Host programming: data transfer and partitioning
4. Kernel programming: data types and device memory
5. Kernel programming: operators and functions
6. Image processing

7. Events, profiling, and synchronization
8. Development with C++
9. Development with Java and Python
10. General coding principles PART 2 CODING PRACTICAL ALGORITHMS IN OPENCL
11. Reduction and sorting
12. Matrices and QR decomposition
13. Sparse matrices
14. Signal processing and the fast Fourier transform PART 3 ACCELERATING OPENGL WITH OPENCL
15. Combining OpenCL and OpenGL
16. Textures and renderbuffers

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