

Executing a GPU-enabled Job



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Module Overview



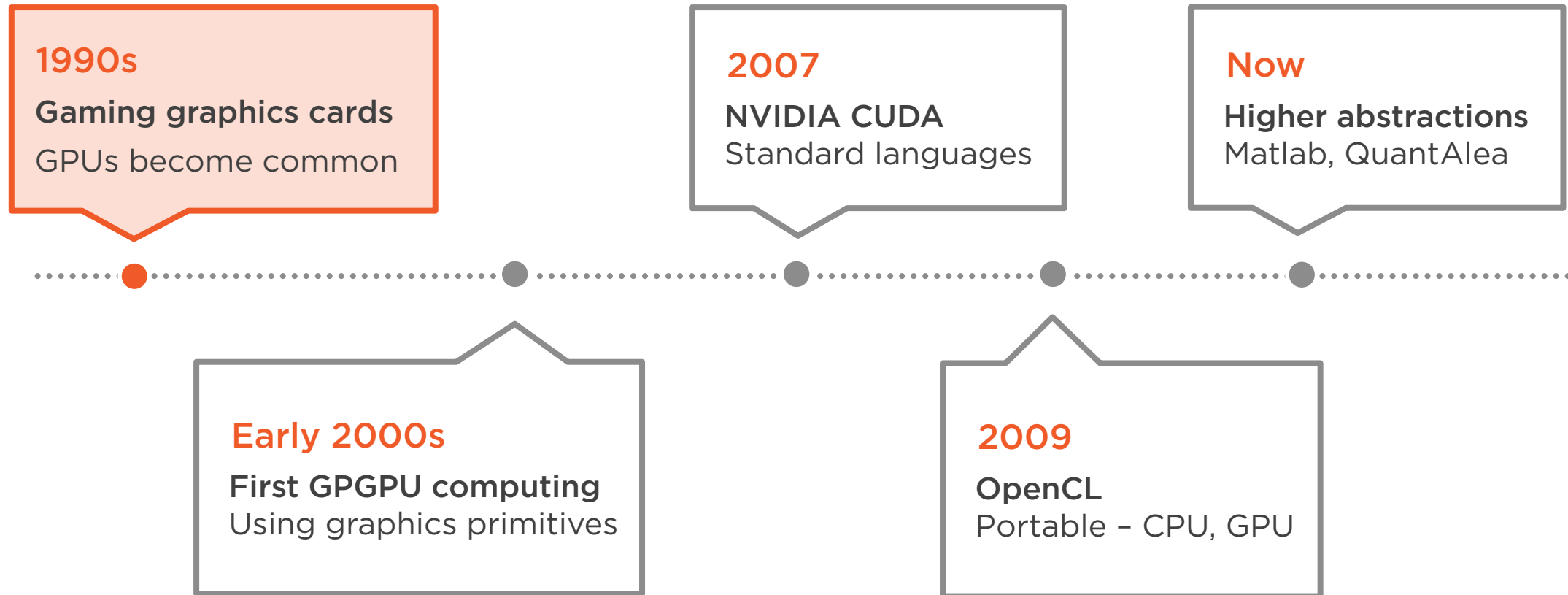
Introduction to GPGPU computing

Understanding GPGPU in Azure Batch

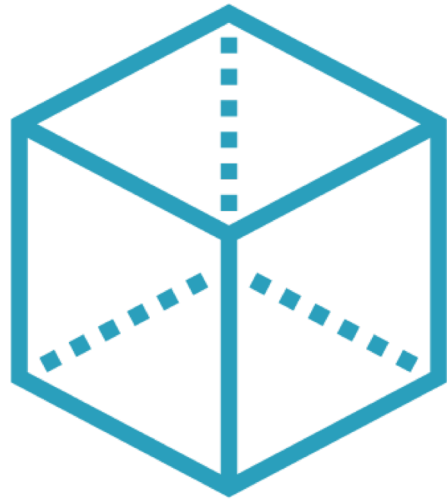
Utilizing GPGPU in the OptionPricer



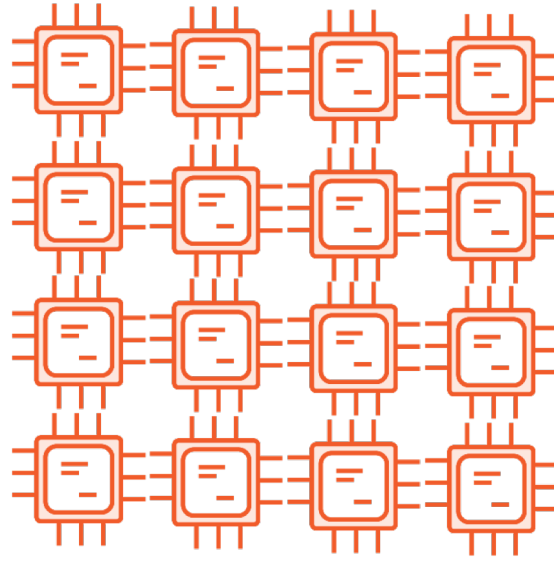
A Brief History of GPGPU Computing



Graphics Cards for Gaming



3D-only and later
integrated with 2D



GPUs have many cores
to render complex 3D
scenes

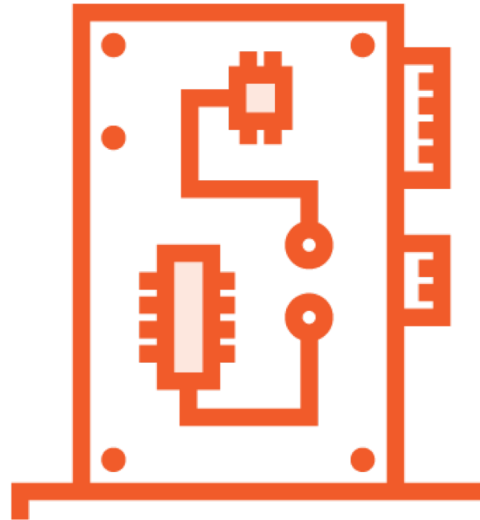


GPU cores are not
general purpose like
CPU cores

NVIDIA CUDA



Standard
programming
languages



Server-grade
GPGPU
hardware line
'Tesla'



Code is not
portable

Requirements for GPGPU Computing

Parallelizable algorithm

Homogenous operations

**Computation not data
intensive**

**Hardware-specific
optimization**



Demo



Converting the OptionPricer application:

- Call GPGPU simulation library
- Use N-series VM
- Install drivers and CUDA runtime



Summary



GPUs are powerful and not just for games

GPGPU computing is use-case specific

Enabling GPGPU in Batch is simple

