SHIVANSHU GUPTA

MCA Artificial Intelligence Student | CUDA C++ and AI/ML

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PROFESSIONAL SUMMARY

MCA Artificial Intelligence student and BBA graduate. I build Python applications and CUDA C++ kernels for computer vision and matrix multiplication. I am interested in GPU architecture and AI/ML engineering.

TECHNICAL SKILLS

Programming: Python, CUDA C++, data structures and algorithms

GPU computing: Kernel fusion, shared-memory and register tiling, CUDA events, cuBLAS, Compute Sanitizer

AI and tools: PyTorch, scikit-learn, computer vision, Git/GitHub, SQL basics

PROJECTS

GPU-Accelerated Visual Pattern Matching

Implemented fused CUDA C++ inference for a handwritten-digit CNN. Reduced GPU-resident latency by 13.7% at batch 128 versus the direct CUDA implementation while matching all 360 PyTorch predictions.

Benchmarked three FP32 GEMM kernels against cuBLAS. The register-tiled kernel ran 3.86x as fast as the naive kernel at 2048 x 2048 x 2048 on an RTX 5060 Laptop GPU.

TradeVelocity | Team project, Python, FastAPI, React

Worked on matching rules and order-book correctness for a local order-matching application with partial fills, amendments, cancellations, and execution history.

InvenTrack | JavaScript, Node.js, SQLite

Inventory management application for stock movements, suppliers, reorder planning, and operational activity.

EDUCATION

MCA in Artificial Intelligence | Bennett University, currently pursuing

Bachelor of Business Administration (BBA) | Completed

CBSE Class 12 | Commerce with Computer Science | 71%

CBSE Class 10 | 74%

ADDITIONAL LEARNING

Cybersecurity foundations, networking, and risk assessment. Additional interests include natural language processing, generative AI, and AI agents.