

# Priyal Riddhish Chhatrapati

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## EDUCATION

### Georgia Institute of Technology (GPA - 4.0/4.0)

Aug. 2021 – Present

*Master of Science in Computer Engineering*

Atlanta, GA

- **Coursework:** Deep Learning, Advanced Programming Techniques, Parallel Programming, Interconnection Networks, Advanced Computer Architecture
- **Research:** Accelerating Object Detection and Tracking by exploiting Parallelism

### BITS Pilani (GPA - 9.1/10)

Aug. 2016 – May 2020

*Bachelor of Engineering in Electronics and Instrumentation Engineering*

Goa, India

- **Research:** Approximate Computing for Fault Tolerant Data Storages(National University of Singapore)
- **Coursework:** Computer Architecture, Object Oriented Programming, Real Time Operating Systems(Audit), Algorithms(Audit)

## EXPERIENCE

### NVIDIA

May 2022 - August 2022

*Deep Learning Performance Intern, TensorRT*

Santa Clara, USA

- Performance optimizations for **MLPerf** workload using **TensorRT** C/C++ and CUDA libraries
- **Profiling Deep learning Code** using Nsight Systems

### Georgia Institute of Technology

August 2021 – May 2022

*Research Assistant*

Atlanta, USA

- Implementing State of the Art **Computer Vision Object Tracking Models** for Self Driving Cars;
- **Rewriting software stack (Pytorch)** for customized hardware (FPGA accelerator chip);
- Achieved a **speedup of 220x** over a sequential implementation.

### SiFive

Sept 2020 – June 2021

*Engineer - VLSI*

Bangalore, India

- Developed **MIPI CSI-2 v3.0 bus**; Standard Interface between Cameras and Host Processor;
- Co-authored Specification Document for the CSI-2 bus; Co-authored Microarchitectural Document for the CSI-2 bus
- Implemented CSI-2 bus using Verilog; **Saving ~\$100,000** in licensing costs and royalties.

## PROJECTS

### Convolution Neural Network Accelerator

- AXI4 compliant simulator to interface with CPU
- Novel 1 dimensional Weight stationary dataflow

### Trace Based L1 Cache Simulator

- Developed a Simulator supporting variable block size, associativity and cache size
- Reports number of hits, misses and latency

## SKILLS

**Languages :** C/C++, Python, Java, Bash

**Frameworks, Libraries :** Pytorch, CUDA, Multiprocessing, Pthreads, OpenGL, Numpy, Linux

**Tools :** GitHub, Vivado, MATLAB, Proteus, ModelSim, Jupyter