# Dineshkumar Bhaskaran

dineshkumarb@gmail.com https://github.com/dkbhaskaran www.linkedin.com/in/dineshkumarbhaskaran-a88a2a7

PROFESSIONAL EXPERIENCE

SENIOR MEMBER OF TECHNICAL STAFF AUG 2019 – TILL DATE

#### AMD INDIA PVT LTD

#### Accelerated Data Science for ROCm

Ongoing activity for adopting Rapids projects for implementing popular pyData libraries for data science application on AMD GPU for ROCm stack. Owner for rapids' CUDF projects like rapids-cmake, rapids memory manager (RMM), and NVComp. CUDF is a close substitution for pandas.

## **MLPerf Inferencing**

Implemented python reference code for models resnet50, yolov4 and Bert on AMD Instinct GPUs for multiple backends like pytorch, tensorflow, Tensor virtual machine (TVM) and MIGraphX. Implemented C++ lightweight inference server for resnet50 on TVM and improved performances by 51.5%.

#### **ROCm Clang compiler**

- ROCm Compiler Support maintainer from Aug 2019 to Sept. 2021.
- Implementation of Multithreading and in-memory compilation support for AMDs lightning compiler (based on LLVM). In-memory compilation improved overall compilation process by 1.07% on Linux and ~29% on windows.

#### PRINCIPLE ENGINEER

FEB 2012 - JUNE 2014

### CAPGEMINI ENGINEERING (previously ARICENT)

- ✓ Led efforts to create an accelerated storage I/O library using GPUs. Developed parallel and improved erasure-code algorithms in CEPH. This work was presented at SNIA SDC India and then Santa Clara under the title "Accelerated Erasure Coding: The New Frontiers of Software-Defined Storage 2018".
- ✓ Led a team to create software defined radio solution for Aricent. Involved in offloading FFT algorithm in OpenAirInterface 4G stack with NVIDIA GPUs and Xilinx FPGAs.

#### PRINCIPLE ENGINEER

FEB 2012 - JUNE 2014

#### CANON INC JAPAN, INDIA

- ✓ Led a team to create an efficient medical image processing library for Canon medical apparatuses. Parallelized and optimized Image registration algorithm components like Preprocessing algorithms, Optimizers (Powell, LM, GD, SGD), Metrics (MI, NMI, RIU, SSD), transformation algorithms, and Resampler.
- ✓ Managed and lead a team, that maintained and enhanced Linux based OS for Canon embedded products. Involved in porting Linux kernel and essential system applications to various ARM based SoCs.

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PROFESSIONAL EXPERIENCE



# BACHELOR OF COMPUTER

SCIENCE FEB 2012 -JUNE 2014

#### INSTITUTE OF TECHNOLOGY

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MASTER
OF COMPUTER
SCIENCE FEB 2012 -

**JUNE 2014** 

## MANAGEMENT COLLEGE FOR ENGINEERING

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