DIVAKAR VERMA

Experienced AI Software Engineer | Specialising in Computer Vision

divakar-verma.com

linkedin.com/in/divakar-verma

github.com/vdivakar

SKILLS

Python PyTorch

C/C++ TensorFlow

OpenCV Git

CUDA Linux

OpenCL Algorithms

Data Structures

INTERESTS

Computer Vision

Camera Imaging

Optimisation

Large-scale data

Speech AI

Creativity Art

EDUCATION

Masters in Computer Science (GPA 4.0/4.0)
Rutgers University, New Brunswick

09/2021 - 05/2023   *New Jersey, US*

Specialisation - Computer Vision

- Princeton University - Advanced Computer Vision
- Princeton University - Recent Advancements in Computer Vision

WORK EXPERIENCE

Deep Learning Performance, Inference (Intern)
Nvidia

05/2022 - 09/2022   *Santa Clara, US*

Responsibilities

- Develop highly optimised codebase for deep learning model inference.

Senior Software engineer | Camera & Imaging team
Samsung R&D Institute Bangalore (SRI-B)

06/2018 - 12/2020   *(2.3 yrs) Bangalore, India*

Responsibilitiess & Tasks

- Overview: Developed optimised imaging solutions for smartphone cameras using Computer Vision and Deep Learning. I carry strong fundamental in working with Image datasets and Convolutional Neural Networks.
- **AI-HDR**: Brought up Deep learning based image enhancement model in PyTorch for Samsung flagship smartphones. The model's weights were frozen and exported to Qualcomm's SNAP.
- **Deep-Demosaicing**: Demosaicing is the process of interpolating missing color channel information in the raw data captured by the camera sensor. Achieved state-of-the-art quality with PSNR 43.2 using resnet-bottleneck deep learning model (TensorFlow-1.x).
- Other: **Super-slow motion** (SSM) video capture - Productionized software based SSM for mid-tier smartphones; **Optimized image processing** kernels for advanced selfie-capture features.

SDE-2 (ML)
Flipkart

12/2020 - 07/2021   *(0.7 yrs) Bangalore, India*

Responsibilities & Tasks

- Initiated Comparative mean opinion scores (CMOS) evaluation to compare custom Text-to-Speech module trained on Hindi text prompts. Designed time-to-live logic for memory leakage check.
- Managed C++ codebase for Speech-Decoder. Reduced latency by 2% and deployed multiple-domains support for language model.

PATENT

"ELECTRONIC DEVICE AND METHOD FOR CONTROLLING ELECTRONIC DEVICE" [Link] ☐
Novel Super Slow Motion (SSM) capture using software assisted trigger via motion identification maps of region of interest (ROI) frames. Joint inventor for SSM project commercialization in mid-tier smartphones at SRI-B.

PUBLICATION

"Deep Demosaicing Using ResNet-Bottleneck Architecture" [Link] ☐
- Deep learning model for de-mosaicing raw camera sensor data into an RGB image.