



## EDUCATION

### **BITS PILANI** | B.E. IN ELECTRONICS AND INSTRUMENTATION

Aug 2016 - May 2020 | RJ, India

Fluent: Python3, PyTorch, Tensorflow, Mathematica

Familiar: C++, Java, CUDA, OpenMP, Android Studio, LibGDX

## EXPERIENCE

### **XILINX RESEARCH** | RESEARCH INTERN

Aug 2019 - Jan 2020 | Dublin, Ireland

- To work on Multi-layer offload architectures to minimize footprint of unrolled DF architectures and design effective algorithms to aid generation of run-time schedules in the FINN-R framework for FPGAs.

### **URANIOM** | RESEARCH INTERN

Jan 2019 - Present | France (Remote)

- Implementing semantic segmentation models for face transfer across GIFs, progressive GANs for realistic UV map generation and exploring effective weight-sharing strategies for neural networks under a research collaboration.

### **WOLFRAM** | UNDERGRADUATE RESEARCHER

June 2018 - July 2018 | Waltham, Massachusetts

- Developed HadaNet MLPs in the Wolfram Language and worked on optimized C OpenMP kernels for GEMM and Convolutions using the Hadamard Binarization methodology. [[OpenMP kernel](#)] | [[CUDA kernel](#)] | [[Whitepaper](#)]

## PUBLICATIONS & GRANTS

### **HADANETS: FLEXIBLE QUANTIZATION STRATEGIES FOR NEURAL NETWORKS** [[LINK](#)]

CALIFORNIA | JUN 2019

Paper accepted at **CVPR'19 UAVision workshop - Orals**.

Delivering a "Theatre Talk" and poster at the Intel Demo Booth at CVPR'19.

### **WOLFRAM TECHNOLOGY CONFERENCE – SPEAKER**

CHAMPAIGN, IL | OCT. 2018

Delivered a talk on my research on Hadamard Neural Networks.

### **INTEL AI MEETUP – SPEAKER** [[PPTX](#)]

DELHI, IN | SEPT. 2018

Spoke about my research on scaling AI using Intel technologies. This event was organized by Intel.

### **INTEL AI ACADEMY SUCCESS STORY** [[LINK](#)]

Intel published a cover story of my research done in the field of Quantized Neural Networks.

### **INTEL AI DEVCON – POSTER**

SAN FRANCISCO, BANGALORE | MAY & AUG 2018

Presented posters on quantized GEMM kernels for Intel Xeon Phi

### **INTEL NERVANA EARLY INNOVATORS GRANT**

\$5000

Received research grant to develop Binary Precision Neural Networks and Real time Artistic Style Transfer. The technical article can be found [[here](#).] The code can be found [[here](#).]

### **INTEL CVPR TRAVEL GRANT**

\$2500

Received a travel grant from Intel to present at the Intel Demo Booth at CVPR'19.

### **WOLFRAM STUDENT AID**

\$2400

Received aid to attend the Wolfram Summer School and develop Hadamard Binary Neural Networks.

### **KVPY SCHOLAR**

Selected as a KVPY scholar by the Department of Science and Technology, Government of India.