



EDUCATION	Rochester Institute of Technology, Rochester, NY BS in Computer Engineering Minor: Mathematics Expected Graduation Date: May 2018
COURSES	Computer Science I & II, Applied Programming in C, Digital Systems Design I & II, Assembly Programming, Machine Intelligence, Deep Learning, Operating Systems, Reconfigurable Computing (FPGA) Combinatorial Game Theory, Numerical Analysis Circuits I & II, Electronics I
SKILLS	PROGRAMMING LANGUAGES Proficient with: C/C++, Python, Java, VHDL, ARM Assembly Familiar with: SystemVerilog, PHP, JavaScript, Swift, MySQL, C#, Matlab, HTML, CSS SOFTWARE AND DEVELOPMENT TOOLS Proficient with: Tensorflow, Caffe2, Android Studio, Git, Docker, CVS, Unity3D, XCode Familiar with: CUDA, OpenGL, OpenCV, Cadence OrCAD, PSpice, Xilinx Vivado, Multisim, Torch, Caffe, PyTorch, React OPERATING SYSTEMS Proficient with: Linux, Mac OS, Windows HARDWARE Proficient with: Oscilloscope, Function Generator, Multimeter, Spectrum Analyzer, Breadboard, Soldering Familiar with: Xilinx Nexys4 DDR FPGA Board, Beaglebone Black, Raspberry Pi, NVIDIA Jetson TX2
HONORS	NSF I-Corps Funding Recipient Nominated for RIT Outstanding International Student Award 2015 RIT International Scholarship
LEADERSHIP	RIT Bangladesh Cultural Society RIT World Music Ensemble RIT ACM SIGCHI (Vice Chair) - 2015 RIT AI Club - RITficial Intelligence RIT Emerging Professionals Leadership Certificate Volunteering at Mentaid and Hope Home Education Center – Calcutta, India Peace Ambassador for APCC 2011 – Fukuoka, Japan

EXPERIENCE

RESEARCH ASSISTANT

Center on Access Technology, NTID, RIT | Rochester, NY
September 2016 - May 2017; August 2017 - Present

- Develop research tools for Deaf/Hard of Hearing Access Technology research projects - Speech/Video to Text etc.
- Technologies used: Android Development, Node.js, TensorFlow

DEEP LEARNING SOFTWARE INTERN

NVIDIA Corporation | Santa Clara, CA
May 2017 - August 2017

- Worked on different projects for Caffe2 and TensorFlow in the Deep Learning Frameworks Team
- Projects involved making new tools, improving software design, and doing kernel optimizations
- Technologies used: C++, Python, Protobuf, CUDA, Caffe2, TensorFlow

RESEARCH ASSISTANT

FETLab, GCCIS, RIT | Rochester, NY
September 2015 - December 2015; August 2016 - May 2017

- Build an automatic speech recognition system that classifies sounds of actions on everyday objects. Research domain: Human Computer Interaction and Ubiquitous Computing
- Technologies used: Python, Tensorflow, Android, Scikit-Learn

DEEP LEARNING ENGINEERING INTERN

NextDroid (Startup) | Boston, MA
June 2016 - August 2016

- Wrote neural network models for road image segmentation for a semi-autonomous/self-driving car
- Wrote image segmentation web interface for mass data collection that decreased data collection cost by 60%
- Technologies used: Caffe, Tensorflow, Torch, CUDA, NVIDIA Jetson TX1, NVIDIA DRIVE PX, Python, C++, Lua

COMPUTER VISION DEVELOPER (Co-op)

Ahold USA | Quincy, MA
January 2016 - May 2016

- Used tensorflow and caffe to do transfer learning for product package recognition
- Developed an augmented reality iOS app that gives a location-aware shopping experience

COMPUTER VISION RESEARCH ASSISTANT

Discover Lab, School of Media Sciences, RIT | Rochester, NY
June 2015 - December 2015

- Developed, debugged, and optimized an augmented reality app, called RocreadAR for a research project aiming at integrating different media for publishing and communication.
- Technologies used: OpenGL, OpenCV, Unity3D, Vuforia SDK, Wikitude SDK, Git, Android, iOS, Google Glass

OMEN: AN OPEN SOURCE HARDWARE/SOFTWARE CO-DESIGN FRAMEWORK FOR DEVELOPING HARDWARE ACCELERATORS FOR MACHINE INTELLIGENCE (in progress)

Writing Systolic/Wavefront Architecture in VHDL for RNNs
Writing Device API to support Deep Learning Frameworks in FPGA

ONE SHOT LEARNING FOR ACOUSTIC RECOGNITION

2016 Western New York Image and Signal Processing Workshop
Poster presentation on using one shot learning for classifying sounds of different actions on a coffee machine, such as: pressing on/off switch, brew switch, steam switch etc.

OPEN SOURCE CONTRIBUTIONS IN DEEP LEARNING RESEARCH

Caffe2 - Solved several bugs in Seq2Seq. Commit #35dc34
TensorFlow - Solved bug in Android Demo. Issue #1371
TensorFlow - Implement Max Unpooling Op - Issue #2169
elab/Torch7-profiling - Solved bug-Commit #7fdb7af and #0e64c08
elab/ENet-Training - Improved code - Pull request #9

ARESUME

Access at Google Play Store: www.goo.gl/RNB2Tx
An Augmented Reality android app that gives a fun and interactive resume reviewing experience. Made using Unity3D, Vuforia SDK, and Android Studio. This resume is augmented reality enabled!

CLICK WARS - RIT IOS APP CHALLENGE HACKATHON 2015

Access at: www.goo.gl/4qX6sA
A game based app called "Click-Wars" that uses face detection and bluetooth to connect multiple players to play a game of who can click each others face faster.

PROJECTS