SAURABH MISRA

sm1@cmu.edu ♦ (412) 313-4322 ♦ www.linkedin.com/in/saurabh-misra

EDUCATION

Carnegie Mellon University, Pittsburgh, PA
Master of Science, Electrical and Computer Engineering — May 2019
Selected Coursework: Introduction to Machine Learning (PhD), Cloud Computing, Mobile and IoT Computing Services

Indian Institute of Technology (BHU), Varanasi, India
Bachelor of Technology, Electronics Engineering — May 2015
GPA: 8.21/10

SKILLS

Programming Languages: (Proficient) Python, C++; (Familiar)Java, Perl,C
Frameworks and tools: Tensorflow, Hadoop, Scikit Learn, Pandas, Matlab, GDB, Perforce, Git,OpenCV

EXPERIENCE

Singapore University of Technology and Design, iTrust Lab — Singapore
Research Assistant — August-Dec 2017

- Developed an LSTM based deep learning system to detect a particular kind of DDoS network attack utilizing time series data achieving attack detection precision of 0.998 and recall of 1.0

Nvidia Corporation, Performance Tools Team — Bangalore, India
Architect — July 2015- July 2017

- Designed a Deep Learning based performance stats classifier to determine performance of full graphics workloads during chip RTL simulation. Created neural network and adversarial autoencoder models.
- Automated performance regression triaging using clustering. Formulated the problem, mined data, did exploratory data analysis and created unsupervised models to group similar failures.
- Designed a tool from scratch which streams temporal performance data from any workload running on GPUs. The tool improved GPU driver's performance by 15% for async compute workloads.
- Developer of the primary performance tool in NVIDIA to analyze RTL and application performance on silicon.

Indian Institute of Science, CAD Lab — Bangalore, India
Research Intern — May-July 2015

- Designed datapath for a pipelined vector processor for machine learning applications which did matrix operations.

PROJECTS

Music Generation with Reinforcement Learning (CMU course project) — March '18- Present

- Designing a research project to extend a multi-track music generation model so that it can generate longer music sequences and tune it in a music theory aware method using Reinforcement Learning.

Techaaritra Innovations (college startup/independent project)
Distance Learning Application — July- October 2012

- Developed a desktop application based on PyGTK GUI, ffmpeg, urllib2 on python which facilitated transmission of video stream over network. Also designed the database of the users of the application and maintained the courses using MySQL.

LEADERSHIP AND EXTRA CURRICULARS

- General Secretary of IEEE Students branch IIT BHU, (2012-2014)
- Secretary of Western Music Club, IIT BHU and an active drummer (2014-2015)