Ravi Gupta

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EDUCATION

PURDUE UNIVERSITY
MS(thesis) in Computer Engineering
Expected Date: May 2016
Current GPA: 3.4/4.0

MANIPAL UNIVERSITY
BS in Electrical Engineering
May 2012 | Manipal, India
Cum. GPA: 9.78/10.0

SKILLS

Languages
Perl • Bash Shell • C • Python • LaTeX

Runtime Systems
OpenCL • CUDA

Hardware Platforms
TI Keystone2 • Raspberry PI • STM Spear320

Simulation & Modelling
Matlab • NI Labview • NI TestStand

COURSES

Computer Architecture
Computational Models and Methods
Fault Tolerant Comp. System Design
Numerical Analysis
Operating Systems

CO-CURRICULAR

Active Member, HKN
Eta Kappa Nu, ECE Honorary Society

Hack The Anvil Hackathon
• Best prize from Context.IO
• Microsoft Kinnect and Phillips Hue
• Motion and Emotions - Light Control

Debugging Workshop
• Organised workshop for Junior students
• DDD, Valgrind, Seg faults

PROFESSIONAL EXPERIENCE

LAWRENCE LIVERMORE NATIONAL LAB | Summer Scholar
June 2014 – Present | Livermore, CA

STATuner: Efficient tuning of CUDA kernels parameters
- Extracted static features influencing performance using LLVM
- Machine Learning technique to predict optimal block size
- STATuner(4.4%) against Occupancy Calculator(6.6%)

SCHNEIDER ELECTRIC | Software Verification Engineer
August 2012 – June 2014 | Bangalore, IN

Verification Platform for Embedded Networked Devices
- Verification strategies and tests - TCP/IP, RSTP, SMTP, SNTP
- Modbustester: GUI tool for automated verification of MODBUS/TCP
- Modbustester reduced verification cycle by over 30 %

All-in-One Communications Data sniffer
- Embedded application to sniff and log data messages
- Canbus, Ethernet, Serial, Digital and Analog I/O
- Event reconstruction for validation of sequence of events

PURDUE UNIVERSITY | Graduate Teaching Assistant
Jan 2015 - May 2015 | West Lafayette,IN

- ECE 369: Discrete Maths for Computer Engineers

ACADEMIC PROJECTS

Graduate Research | DCSL | Spring 2015
- Explored the two level scheduling strategy in OpenCL - DSP
- Proposed programming methods to boost performance
- On distinct type of applications from Rodinia benchmark suite

Operating System | Spring 2015
- Implemented Extent and Checksum based file system in XV6
- The checksum based files improved reliability
- Creating Extents lowered the metadata overhead and performed good for sequential accesses

Computer Architecture | Fall 2014
- Agree Predictor and Perceptron based Branch Prediction in Gem5
- Studied the performance and prediction accuracy of these techniques on SPEC 2006

Fault - Tolerant Comp. System Design | Fall 2014
- Auto-selection of code segments to run on a host/accelerator
- Segmenting the application into distinct functions
- Trial run for dynamic analysis using trial data
- Extrapolating the trial results to select the hardware