Anmol Gupta

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EDUCATION

Boston University
Boston, MA
MS with Thesis
Computer Engineering
Graduation May 2017
GPA: 3.73

Mumbai University
Mumbai, India
BE
Electronics Engineering
Graduated - May 2015
GPA: 3.72

COURSEWORK

- Computer Architecture
- Digital VLSI
- Verilog and FPGA
- Multi-core CPUs & GPUs
- Embedded Systems
- Operating Systems
- Cybersecurity
- Machine Learning

HARDWARE

- RISCV
- Intel x86
- ARM
- MIPS

SOFTWARE

Proficient	Mid	Familiar
C/Cpp	Matlab	MySQL
Assembly	Cuda	Perl
Verilog	OpenMP	HTML
Python	OpenCL	
Bash	JAVA	
SystemVerilog	LaTeX	

TOOLS

Cadence Virtuoso	Git
Scikit-learn	PyMTL
Xilinx ISE/Vivado	QEMU

TEACHING ASSISTANT

- Digital VLSI Circuit Design
- Introduction to Electronics
- Computer Architecture

EXPERIENCE

Integrated Circuits & Systems Group | Research Assistant
Boston University, Boston, MA | May-16 to Present

- Working with Prof. Ajay Joshi and Prof Manuel Egele on design and development of hardware-based Security

Siemens, Ltd. | PLC Design Intern
Mumbai, India | June-13 to July-13

- Design and Programming of injection modules on S7200 and S7300 PLCs at the Contactors and Relays Manufacturing Unit

MS THESIS

Malware Detection using HPCs | May-16 – Present

- Examine the use of Hardware Performance Counters (HPCs) with supervised machine learning techniques for malware detection
- Goal is to prove that it is not possible to classify high-level behavior of a program (whether it is malware or not) using the profiles from HPCs

PROJECTS

Security Assessment of Bitcoin | December 2016

- As a security assessment for the cybersecurity course, highlighted the various attack surfaces that are exploited by Wallet Vulnerabilities, Time Jacking and Transaction Malleability
- Demonstrated the vulnerability exploited in the famous Mt. Gox attack

MBTA Live Tracker | April 2016

- Designed an embedded system with touch screen based GUI for live tracking of Boston's public transport system - the MBTA, using GUMSTIX and RASPBERRY PI controllers. Link

Mini OS on bare-metal | April 2016

- Implemented a basic operating system (OS) on bare-metal
- The OS booted from a GNU-GRUB2 Multiboot Loader, loaded a file-system on the RAM and used a FIFO scheduler to schedule processes

Rush Hour | December 2015

- Interfaced a keyboard and a HDMI display monitor to Nexys-3 (based on Xilinx Spartan-6 LX16 FPGA) board to make a video game. Link

4-AXIS SCARA BOT | May 2015
Senior Design Project

- A SCARA bot is rigid in all but Z direction.
- It had a complex mechanical design with load capabilities up to 10 kg (22 lbs) and the motors were programmed to rotate at 0.1 radians precision

AWARDS AND EXTRA-CURRICULAR

2014	1st Position in Prakalpa-14 (national level project exhibition) for the project 'Securing Home Automation using Dropbox'
2012-2015	Technical Head and Member of IEEE-KJSCE Student Chapter