

# Dheeraj Ramchandani

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## OBJECTIVE

**Seeking an internship to utilize my strong programming and problem solving skills.** Graduate Student at Georgia Tech Lorraine. Experienced in C, C++ with over 3 years of work experience in Samsung R&D Bangalore. Proficient in developing quality software with respect to data structures, algorithms and system architecture.

## EDUCATION

**Georgia Institute of Technology**, Metz, France

May 2021

Master of Science in Computer Engineering

GPA: 1st Semester Student

**Courses:** Computer Vision, Machine Learning, Cryptography.

**National Institute of Technology**, Warangal, India

June 2016

Bachelor of Technology in Electronics and Communication Engineering

GPA: 8.2/10

**Courses:** Computer Architecture, Data structures and Algorithms, Digital Image Processing.

## TECHNICAL SKILLS

**Programming** (Proficient) C/C++ (Algorithms, Data structures), Python (familiar) (MATLAB, HTML)  
**Softwares** OpenCV, numpy, Wireshark, Visual Studio, Source Insight, Arduino, Latex, Git.

## EXPERIENCE

**SAMSUNG SEMICONDUCTOR INDIA RESEARCH** (Senior Engineer)

June 2016-July 2019

- Designed and developed an IO-MARGIN software which analyzed the effects of timing parameters (tCWL, tRC, etc) on DDR4 performance and selected the optimal data set.
- Hacked a linux system by manipulating its page tables using Row Hammering (DRAM reliability issue) and implemented Row Hammering at firmware level using CPGC.
- Utilized the PCI protocol to implement a device driver to configure DRAM memory controller via reading and writing the configuration registers.
- Understood DDR4 architecture and implemented efficient algorithms such as Moving Inversion, Memtest86 in C language to detect functional errors (Stuck at Fault, Coupling Faults) in it.
- Increased the output by 40%** by developing a Trace 32 script which automated the DDR4 testing process.
- Leveraged knowledge in Git, Jira, Linux, Logic Analyzer, data structures, Intel Kabylake, Skylake, programming and debugging in C++ using visual studio, DRAM initialization, Intel MRC code, DDR4 architecture.

## VOLUNTEERING

**EPICS (Engineering Projects In Community Service)**

Jan 2015-May 2015 & Aug 2015-Dec 2015

- Designed and implemented smart chair for old age and disabled people which allowed them to control lights through bluetooth (Home Automation) and call someone. This reduced their dependency on other people.

## AWARDS & LEADERSHIP

- Presented tech talks about Cold Boot attacks on DRAM and Cryptocurrencies to over 150 people.
- Tutored Junior Students at HACKATHON 2015** (organized by Lakshya Foundation and NITW for solving social issues) on problem-solving and debugging hardware issues.
- Campus Ambassador from Samsung**, mediated between the college and company regarding placements, helped students with the interview process.

## CERTIFICATIONS

- CompTIA Security+**
- Introduction to Linux, Linux Foundation, Edx ([Certificate](#)).
- Programming For Everybody (Python) University of Michigan Coursera ([Certificate](#)).
- Software Security by University of Maryland, College Park, Coursera ([Certificate](#)).
- Python Data Structures, University of Michigan Coursera ([Certificate](#)).
- Linux Server Management and Security, University of Colorado Systems, Coursera ([Certificate](#)).