Deeraj Nagothu

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EDUCATION

Binghamton University-SUNY   Binghamton, NY
Ph.D in Electrical and Computer Engineering   *Expected May 2023*

Binghamton University-SUNY   Binghamton, NY
MS in Computer Engineering; GPA: 3.83/4.0 (Top 5%)   *Aug 2015 - Dec 2017*

SASTRA University   Tamil Nadu, India
B.Tech in Electronics and Communication Engineering; GPA: 7.4/10.0   *Jul 2011 - May 2015*

SKILLS SUMMARY

- **Languages**: C/C++, python(expert), JAVA, C#, VB, JavaScript(proficient), tclsh, bash, powershell(prior experience)
- **Tools**: Docker, GIT, Matlab, Eclipse, Microsoft Visual Studio, Clearcase, DOORS
- **Additional**: TCP/IP programming, webpage design by using HTML, XML and CSS

PROFESSIONAL EXPERIENCE

ZF North America, Inc   Farmington Hills, MI
System and Hardware Engineer - Summer Intern   *May 2021 - Aug 2021*

- **Customer Requirement**: Developed toolkits to improve legal regulation import to DOORS (reduce 25% time).
- **System Design**: Assisted with FBDD & TP review, analysis and report, then organized work procedures.
- **Technical Support**: Provides software flashing and validation on new ECU modules in Marshall plant.

Siemens Numerical Control Ltd   Nanjing, China
System integration Engineer   *Oct 2011 - Jun 2016*

- **Product Development**: Participated in research, development and market release of Siemens SINUMERIK-808D numerical control system and Siemens SINUMERIK-808D Advanced (Digital bus) numerical control system.
- **Test Automation**: Developed test automation system for SINUMERIK-808D by using of VB scripts, PowerShell and bash scripts, so that all manual test tasks could be executed by computer automation test system.
- **Continuous Integration**: Integrated auto-build & auto-test tools so that daily test could be executed automatically during the night, increased test efficiency and quality by shortening the average test time from 2 days to 0.5 day.

Siemens AG DF MC R&D   Nanjing, China
SINUMERIK product family integration tool development program   *Jun 2013 - July 2013*

- **Test Platform Investigation**: Collaborated with experts working on SINUMERIK-840D system to develop system integration and test automation tools.

Siemens Numerical Control Ltd   Nanjing, China
System integration Engineer   *Jun 2010 - Sep 2011*

- **Product Design**: Participated in research, development and market release of Siemens LOGO!0BA7 smart PLC.
- **Firmware Development**: Developed network model of LOGO by implementing Siemens standard S7 communication protocol TCP/IP layer.
- **Manufacturing Test**: Designed production test FW interface to support manufacturing test, which not only reduced defective rate of the product but also increased the manufacturer's productivity.

ACADEMIC PROJECTS

- **Plug board Proxy (Networking)**: Developed a plug board proxy that adds an extra layer of encryption to connections towards TCP services. Clients running on same server connect to pbproxy, which then relays all traffic to actual services. (Mar '16)
- **Asynchronous Work Queue Manager (Kernel Programming)**: Developed a kernel module to serve as an asynchronous work queue manager with configurable worker threads. Implemented netlink sockets to propagate callbacks from kernel to user land and throttling to improve job extraction latency. (Nov '15)
- **Anti-Malware Stackable File System (Kernel Programming)**: Implemented a stackable, anti-malware Linux file system that prevents the existing file system from being corrupted by malware by detecting virus pattern while attempting to open, read and write a file. (Oct '15)
- **File Encryption System Call (Kernel Programming)**: Implemented a system call in Linux kernel, which supports multiple ciphers to encrypt or decrypt an input file.(Sep '15)

HONORS AND AWARDS

- Outstanding MS research 2017 - 2018, Department of Electrical and Computer Engineering, Binghamton University.