

Neeraj Pal

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EDUCATION

ABDUL KALAM TECHNICAL UNIVERSITY

BACHELOR OF TECHNOLOGY
IN COMPUTER SCIENCE
2013-2017 | Delhi NCR, IN
4th yr aggregate: 74.85%

CENTRAL BOARD OF SECONDARY EDUCATION

HIGHER SECONDARY CERTIFICATE
2012 | Kota, IN
Percentage: 55.60%

RAJASTHAN BOARD OF SECONDARY EDUCATION

SECONDARY SCHOOL CERTIFICATE
2010 | Sawai Madhopur, IN
Percentage: 76.00%

LINKS

Twitter @_neerajpal
Medium @_neerajpal
LinkedIn neerajpal09

OPEN-SOURCE CONTRIBUTION

GitHub neerajpal09
Stack Exchange neeraj-pal
*nix mailing list neerajpal

COURSEWORK

UNDERGRADUATE

Ethical Hacking & Prevention
Operating Systems
Cryptography & Network Security
Cybersecurity

INDEPENDENT COURSEWORK

Cybersecurity at IISc, Bengaluru
Embedded Systems at IISc, Bengaluru
Python Programming
Embedded Systems & Robotics

TOOLS & FRAMEWORK

nmap • nessus • openvas • metasploit
nagios • tor • gpg/pgp • openssl
openssh • radare2 • peda • elf-utils
clamav • rkhunter • maldet • snort
ossec • iptables • wireshark • tcpdump
AFL • relayd • selinux • docker • gdb
tcpwrapper • mysql/mariadb • mongoddb

EXPERIENCE (2 YEARS)

CLOUDSEK INFO SECURITY PVT. LTD | VULNERABILITY ANALYST

July 2018 – October 2018 | Bengaluru, IN

RESPONSIBILITIES

- Developed new security module for the product using Python
- Analyzed, demonstrated and documented high-risk vulnerabilities
- Source-code reviewed during vulnerability analysis
- Debugged software to analyze the internals of vulnerability
- Provided support and solved complex issues for infrastructure team and cross-departments for *nix related issues

PYRAMID CYBER SECURITY

& FORENSICS PVT. LTD | TECHNICAL ARCHITECT

May 2017 – September 2017 | New Delhi, IN

Project	ViewPoINT – Social Media Monitoring
Language	Python Scripting
Description	It is the tool for extracting information from social media channels such as: Twitter, Facebook, Wikis, News Sites and user-generated content from time to time. It is the tool to gauge current trends in the industry. The process first gathers data from different websites and then performs analysis based on different metrics like content share, comments, replies, and text analytics to identify positive or negative emotions about the brand.

RESPONSIBILITIES

- Developed security modules using C++, Python and Shell Scripting for Linux environment
- Designed and implemented algorithms to extract data from publicly available sources
- Performed vulnerability assessment and penetration testing of servers
- Researched and analyzed system exploits and vulnerabilities to support Red Team assessment activities
- Provided support and solved complex issues for development team and cross-departments for *nix related issues
- Mentored and guided Technical Analysts during their probation period

PYRAMID CYBER SECURITY

& FORENSICS PVT. LTD | TECHNICAL ANALYST

February 2017 – May 2017 | New Delhi, IN

Project	Secure MyNetwork
Hardware	RHEV on Lenovo Thinkserver
Language	Python Scripting
Description	A port vulnerability scanner which provides detailed report of CVEs, impact, advisories, description and remediation and uploads it on the cloud. The project is compiled as a VM image to the client. The client can install it on his server and can access the interface via web.

RESPONSIBILITIES

- Reviewed source-code of product & added new features to the product
- Performed testing of the product against several anti-viruses
- Developed shell scripts and python scripts for cross departments

SKILLS

PROGRAMMING

Unix Shell Scripting • Python
C • C++ • \LaTeX • Linux Assembly

OTHER SKILLS

System Administration • Server Hardening
Network Security (IDS/IPS/Firewall)
Virtualization (QEMU/KVM) • Debug-
ging • Vulnerability Testing • Software Ex-
ploitation • Kernel Engineering (Linux,
OpenBSD & FreeBSD) • Databases • ELF
Binary Analysis

CERTIFICATES

- Awarded certificate of proficiency in Python with A+ grade under the seal of Soft Crayons
- Certified for Embedded Systems and Robotics under the seal of RoboTech Labs Pvt. Ltd

ROBOTECH LABS PVT. LTD | SUMMER INTERN

16 June 2016 – 16 July 2016 | Delhi NCR, IN

Project	Twitter Based Home Automation and Security System
Hardware	Raspberry Pi-3, Motion Sensor, USB camera
Language	Python Scripting
Description	Twitter Based Home Automation and Security System provides home automation like controlling of household electrical appliances and also senses any motion. The project can be controlled using twitter. Twitter bot has been implemented which can automatically tweet statuses, CCTV footage, etc.

MAJOR PROJECT | FINAL YEAR PROJECT

Project	Smart Portable IPS Firewall
Team	4
Role	Team Leader
Hardware	Raspberry Pi-3, Wireless adapter
Language	Unix Shell Scripting
Description	Smart Portable IPS Firewall is a kind of security mechanism which can provide server security from malicious attacks performed by attackers and also provide data security from root-kits, malwares and trojans. It can also monitors traffic and analyze each packet for proper in depth inspection.

RESEARCH

ROBERT BOSCH CENTRE FOR CYBER-PHYSICAL SYSTEMS, INDIAN INSTITUTE OF SCIENCE | PROJECT ASSISTANT

January 2018 – June 2018 | Bengaluru, IN

PROJECT: IMPROVING OPENBSD KERNEL SCHEDULER

Worked with **Dr. Arun Babu** to improve the OpenBSD kernel scheduler.

RESPONSIBILITIES

- Understood and read the OpenBSD kernel scheduler source-code
- Designed and implemented algorithms for improving scheduler or battery consumption in IoT (ARM) devices
- Debugged OpenBSD kernel to get the better understanding of BSD kernel internals
- Provided support to intra-functional teams in C-development, debugging C/C++ applications and *nix related issues
- Emulated some schedulers for benchmarking using Python

DEPARTMENT OF ELECTRICAL ENGINEERING, INDIAN INSTITUTE OF SCIENCE | PROJECT ASSISTANT

October 2017 – December 2017 | Bengaluru, IN

PROJECT: E-SENSE - SENSING AND ANALYTICS FOR AN ENERGY-AWARE SMART-CAMPUS

Worked with **Dr. Arun Babu** and **Dr. Gurunath Gurralla** to create middle-ware, compression algorithms and implemented secure communication algorithm.

RESPONSIBILITIES

- Benchmarked performance and scalability of open-source databases
- Designed, developed, and implemented: middle-ware and secure communication protocols using *chacha20-poly1305* algorithm
- Improved system security by jailing the services and writing rules for firewall and IPS
- Provided support to intra-research organization in automation, Python development, and improving system security for other projects
- Designed and implemented compression-decompression algorithms
- Developed basic dashboard for real-time data