

Gaurav Singh Thakur

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EXPERIENCE:**1)**

- ❑ Designation : Software Engineer 1 (Dev-Test Team at DCCSG)
- ❑ Organization : Cisco Systems Inc.
- ❑ Period : August 2014 to Till date

2)

- ❑ Designation : Web Developer (Internship)
- ❑ Organization : SAIL Bhilai Dept. of CS and IT.
- ❑ Period : May 2012 to July 2012

TRAININGS ATTENDED:

- Inter-Connecting Cisco Network Devices 1&2 : Cisco (India – Bangalore)
- Linux Programming : Cisco (India – Bangalore)
- Python Programming for Game Development : Online (By Rice University)
- Machine Learning and Octave Programming : Online (By Stanford University)

AREAS OF PROFICIENCY:

- Data Structures and Algorithms
- Cisco Routers, Switches: Implementation and Configuration.
- Technology and protocols on several Switching platforms.
- Machine Learning and Network Security

SKILLS Programming :**C, Python, C++, Java, PHP, SQL****Web-technologies :****HTML, CSS, Javascript (and JQuery)****EXPERIENCE:****1) CISCO SYSTEMS INC.: 4TH AUGUST 2014 – TILL DATE****Software Engineer: (DCCSG) (Bangalore, Karnataka)**

Working with Catalyst 6500 Devtest team. The routine activities include working on latest releases of Cat6k images. Roles and responsibilities are:

- Working as a test Software Engineer in Cat6k High-end switching team.
- Apart from the routine work, I participated in the development of the Netflow-Id Management system- an online portal designed to handle customer requests for monitoring a new Netflow-data quantity.

- Technologies: 6500 – Quad Sup VSS and 2-SUP VSS , Port Security, DHCP, Port Channel, SVI, QOS, Fabric Extension (FEX), VRF and hardware forwarding.
- Protocols: MLS, CEF, Trunking (ISL and 802.1Q),STP, RSTP, MST,HSRP, VRRP, LACP / PAGP.
- Effectively utilizing complex lab setups to duplicate and solve problems or recreate a buggy behavior.

Other Relevant Non-Business projects:

- 1. B.Tech. Major Project – Case based study to understand the applicability of Linear & Non-Linear Models with Data Remodelling**
Case – Product Sales estimation using Machine Learning, for products in multiple categories. Worked on Feature Selection, Data Re-modelling , Bagging-based Accuracy boosting, Normality testing and L1 and L2 Regularization techniques for various learning algorithms from Linear and Non-linear domains
- 2. LINEAR REGRESSION AND ARTIFICIAL NEURAL NETWORKS TO PREDICT THE TRANSMISSION COEFFICIENT OF BREAKWATER**
Obtained data from simulations conducted at the Civil Engineering Department of NITK, task being to obtain a relationship between wave parameters and Hydrodynamic Transmission Coefficient.
- 3. Developing a framework for Prediction of Human Performance Capability using Ensemble techniques**
Case – to develop a model for prioritizing features which must be considered during recruitment of new personnel in the software industry. Performed a comparative study between Decision Trees models and Random Forest Model.
- 4. Development of an energy-efficient Mac Protocol for network-lifetime maximization in Wireless-Sensor Networks**
Involved study of various energy-efficient Mac protocols like Leach, Leach-C, S-Mac, D-Mac, etc. Performed clustering using K-medoids to form homogenous clusters to address the issue of coverage in Leach protocol. Involved simulation of the new protocol and Leach to perform a comparative study and were successfully able to improve upon the performance of Leach.
- 5. Network Security (Threats and Counter-measures) - SSL Stripping and Session Hijacking**
ARP Cache poisoning using MITM attack for Session Hijacking and SSL Stripping. Attack implemented using Ettercap, Wireshark and Cookie Injection Scripts for hacking Facebook accounts. Detection Program for ARP Cache poisoning built in C++ using Libcraft for the client-end to validate ARP replys through a local IP-MAC binding.
- 6. Summer Internship - Permission Re-delegation attack : “The Confused Deputy Problem”**
Involved the study and implementation of both web and android based permission re-delegation attacks based on Project Comdroid and the research of Adrienne Felt and Erika Chin at UCB.
- 7. Development of a secure gateway to defend against XSS and Phishing.**
The project involved using a SWAP architecture to defend clients against XSS attacks by using a Reverse Proxy Server for encryption/decryption of page-tags on the Server. The system also provided a local database to validate suspicious pages to defend against Phishing attacks.
- 8. A number of mini- projects in the fields of:**
 - 1. Human Computer Interaction** involving use of object recognition and hand gestures for improving Gameplay and enhanced usability for specially-abled users.
 - 2. Graphics and Game Development** - using Python for games like Pong, Blackjack and Asteroids

RESEARCH PUBLICATIONS

- Gaurav Singh Thakur, Anubhav Gupta, Ankur Bharadwaj, Biju R. Mohan “**Case Based Study to analyze the applicability of Linear and Non-Linear Models**” – *Computer Science Conference Proceedings in Computer Science & Information Technology (COSIT) 2014 by AIRCCSE (September 13-14, 2014)*.
- Gaurav Singh Thakur, Anubhav Gupta, Ankur Bharadwaj, Biju R. Mohan “**Understanding the applicability of Linear and Non-Linear Models using a Case based study**” – *International Journal of Artificial Intelligence and Applications*. (December 2014 issue).
- Rushil Goyal, Kriti Singh, A.V. Hegde, Gaurav S. Thakur. “**Prediction of Hydrodynamic Characteristics of quarter circular breakwater using Stepwise Regression**”. *International Journal of Ocean and Climate Systems, UK (ISSN: 1759-3131)*. (Accepted as a Technical note- Due for publish: 2015).
- Gaurav Singh Thakur, Anubhav Gupta “**Developing a framework for Prediction of Human Performance Capability using Ensemble techniques**” Accepted at the Third International Conference on *Data Mining & Knowledge Management Process (DKMP 2015) by AIRCCSE (Jan 23-24, 2015)*.
- Gaurav Singh Thakur, Anubhav Gupta “**Data Mining for Prediction of Human Performance Capability in the Software Industry**”, Accepted at the *International Journal of Data Mining and Knowledge Management Process, March 2015 Issue*.

ACADEMIC QUALIFICATION PROFILE:

Qualification	Institution	Percentage	Year of Passing
B.Tech (Information Technology)	NITK Surathkal	8.88	May 2014
12 th	Delhi Public School Risali, Bhilai	89.6	March 2010
10 th	Delhi Public School Risali, Bhilai	96.2	March 2008

PERSONAL DETAILS:

Date of Birth : 14th August 1992
Sex : Male
Marital Status : Single
Nationality : Indian
Permanent Address : S/o Mr. A.K. Singh,
Qr-3/B, Street-5, Sector-10, Bhilai, Chhattisgarh (India)
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