CURRICULUM VITAE

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OBJECTIVE

Aiming to achieve a challenging and professional position where I can make a sufficient contribution to the organization in the form of my dedication by using all my skills and knowledge.

EDUCATION

YEAR	QUALIFICATION	UNIVERSITY / BOARD	% / CGPA
2012	M Tech (Computer Science)	Malaviya National Institute of Technology Jaipur	8.75
2010	B Tech (Computer Science)	Kurukshetra University	81 %
2006	XII	CBSE	89 %
2004	X	HBSE	88 %

TECHNICAL SKILLS

Platform: Linux (Ubuntu), Windows

Technology: C, C++, JAVA, VB, HTML, Lex & Yacc, Latex

Subjects: Design and Analysis of Algorithms, Software Engineering, Data

Structure, Compiler, Theory of Computation, Operating Systems,

DBMS.

Database : SQL Server 2005, MS Access

Tools : MS Office, Open Office, Net Beans, Beast, Nessus,

Wireshark, Nmap, Nuclear Rat, mz (IP Spoofing tool)

Field of Interest: Cyber Security

Experience: Three years of experience in teaching in Lovely Professional

University

Courses Taught : C, C++, Data Structures, Database, Design and analysis of

Algorithms

JOB OPPORTUNITIES

- 1. Software Developer in **Headstrong Noida** (placed in 2012 through on campus placement).
- **2.** Assistant Professor in **Lovely Professional University** (placed in 2012 through off campus placement 2012-2015).
- 3. GATE/JE coaching given in Engineers Academy Jalandhar and Ludhiana.
- 4. Currently pursuing PhD from NIT Jalandhar.

STC ATTENDED

- 1. STC on Recent Advances in Natural Language Processing in June 2016, NIT Jalandhar.
- 2. GIAN course on Advanced System Security: Attacks and Defences in July 2016, NIT Jaipur.

ACHIEVEMENTS

- 1. Got Copyright on a software named Mathematical Topological Calculator by MHRD.
- 2. Cleared GATE two times (2010 & 2014) with 96.4 and 97 percentile. Score was 501 and 470.
- 3. Second **Topper** in M Tech.
- 4. Got University scholarship for getting 2nd position in Kurukshetra University Computer **Branch** in B Tech 2nd year.
- 5. Secured 4th rank in district of 10th HBSE Board.
 6. Got 3rd rank in International Informatics Olympiad in 2005.
- 7. Got 2nd rank in Inter School Level Speech Competition in 2004.

PROJECTS

Cyber Warfare (2011-12)

Cyber warfare is a security analysis **research work** based on creating, analyzing and patching of different kinds of attacks possible on a system. In this project, I have created an attack graph for an whole network that can provide state of network with all kinds of possible intrusion paths. In this project, target system will run software made in this project and this will generate a graph showing all possible paths through which an attacker can attack the target system. Graph will represent all possible vulnerabilities of target system and how it can be used to attack it. Also if it is used in an network then it will find vulnerabilities of all systems and will show all possible paths or vulnerabilities through which any system of that network can be attacked. These attack paths consist of chaining of vulnerabilities i.e. consecutive vulnerabilities of systems of network that is to be exploited to reach target system. It also shows the impact factor of every attack path so that we can determine which attack path to be patched first to secure a system or a network. Also, this was an **DRDO funded project**.

Member: 1

Mathematical Topological Calculator (2012-13)

It is software developed to solve mathematical problems of topologies. In case PhD work in the field of mathematics, their target is to develop new theorems. For these theorems, they have to take an example and has to apply random equations on that example. It will be consisting of lot of paper work and consumes lot of time. But with the help of this software, equations can be applied within a millisecond and result that is given by this software will prove new theorem very fast. I have got Copyright on this software by MHRD.

Member: 1 Language: JAVA

Student Management System (2005)

It is management information system that is used to handle student data online. From a college or university, it will remove paper work. All details starting from student's attendance, fees, academic details to students results, college activities, student's assignments uploading and downloading by teachers, separate account for each student and faculty so that everything can be maintained online, student and faculty attendance, staff attendance, feedback survey, hostel booking, complaint booking with fair system etc. All these things are maintained by that software online and hence there is no need of paper and pen.

Member: 2

Role: Coder for modules Database: SOL server

Language: VB

Payroll processing System and Inventory Control System. (2008)

Project was a solution for the payroll system and inventory management system. It will be consisting of several modules that can handle organization data and processing online like maintenance of customer information, stock information, alert status when stock reaches to a limit, sales purchase details, maintenance of stock purchase details from stock holders and if there is any discrepancy then refund of stock details, permanent customers details with their outstanding amount, bad debtors details, salary details of all employees, target maintenance of all sales men, their salary calculation according to their target, salary increment details of employees according to their performance etc.

Member: 1

Database: MS Access **Language**: JAVA

KeyStroke Recognition System (2011-12)

Project was a solution for checking user authentication depending upon its typing style and characteristics. Since in most of the organizations, systems are secured using passwords but it is not the perfect way to secure a system. Therefore, this software will first check the password whether it is correct or not and if it is correct then match the typing style of user with genuine user that is already stored in system. Typing style consisting of Key hold time, inter key time, use of backspace or CAPS lock, key release time, time to go from numeric to alphabetical key and vice versa and then finally average time is calculated for complete password which is checked with original time details with some formula. If it falls under a limit then only used is allowed to enter into the system. With the help of this software, it was impossible for a thief to enter into system (Proof is given in paper). I have written one paper on this project which is published in **Advances in Intelligent system and computing (Springer)**.

Member: 1 Language: JAVA

Projects Supervised

Advanced Fingerprint recognition system (2014-15)

Project was a solution for fingerprint matching with advanced characteristics. This project used some advanced features to match even disrupted finger prints as well as finger prints that are not aligned in proper direction.

Advanced ECLAT algorithm for frequent item set mining (2014-15)

In this project, a new algorithm is developed that is the modified version of ECLAT algorithm for frequent item set mining. It reduces the time of execution and complexity. Hence improves the results of previous algorithm.

Online FIR System

In this project, an online system is developed to launch an FIR online to reduce the overhead of hospital staff at the time of accident, also to reduce the overhead of processing time. It is developed in two languages i.e. Hindi and Punjabi.

Paper Published

- 1. User Authentication using Keystroke Recognition in Advances in Intelligent system and computing (Springer).
- 2. Vulnerability Analysis in Attack Graphs using Conditional Probability in International Journal of Soft Computing and Engineering (IJSCE).
- 3. Interdependent effect of vulnerability to calculate effective attack path score in International Journal of Applied Engineering and Research (Indexed in SCOPUS).

- **4.** Advanced ECLAT Algorithm for Frequent Item Sets Generation in **International Journal of Applied Engineering and Research (Indexed in SCOPUS).**
- 5. Fingerprint matching using advanced pre-Processing Technique in International Journal of Applied Engineering and Research (Indexed in SCOPUS).
- **6.** ECLAT Algorithm for Frequent Item Sets Generation in **International Journal of Computer Systems (IJCS).**
- 7. User authentication by using advanced key stroke recognition in International Journal of Engineering Research & Technology.

EXTRA CURRICULAR

- 1. Participated in Technical Festival organized by J.C.D. college of Engg. Sirsa in 2009.
- 2. Participated in **Tycoon Career Launcher** College Round in 2009.
- 3. Participated in **International Informatics Olympiad** in 2005.
- 4. Participated in **State Level Speech Competition** in 2004.
- 5. Participated in yearly **Independence Day and Republic Day Programs** in a team.
- 6. Participated in School Annual Function Dance Competition in 2000.

HOBBIES/INTEREST

- 1. Playing Computer Games.
- 2. Visiting Places.
- 3. Watching Movies.