

**INTERESTS**

Computational Complexity, Data Structures and Algorithms, Operating Systems, Embedded Systems, Web

**WORK EXPERIENCE****Broadcom Communications Technologies Pvt. Ltd.****Engineer – Software Development****Bangalore****1<sup>st</sup> July 2013 - 4<sup>th</sup> July 2014**

- Worked in implementing a flow control module for Wifi Host Driver for PCIe based wifi chips.
- Worked in implementing intra bss packet transfer in SoftAP mode for PCIe based wifi chips.
- Worked in implementing power save mode support in SoftAP mode for PCIe based wifi chips.
- Worked in designing the software architecture of a low power wifi chip.

**ACADEMIC QUALIFICATIONS**

Qualification	Institute	Year	Cumulative Grade/Percentage
M.Tech (CSE)	IIT Kanpur	2016	8.00/10 (CPI)
B.Tech (CSE)	NIT Calicut	2013	8.84/10 (CGPA)
XII (AISSCE)	St. Antony's Public School & Junior College (CBSE)	2009	92.6 %
X (AISSE)	St. Antony's Public School & Junior College (CBSE)	2007	90.2 %

**SKILL SET**

- **Programming Languages** C, C++
- **Parser Generator** Lex, Yacc
- **Database** MySQL
- **Web Scripting** Basics of PHP, HTML and CSS
- **OS** Windows, Linux

**ACADEMIC PROJECTS****Experimental Operating System and Virtual Machine (July 2012 – May 2013)**

- **Environment** C
- **Tools** Lex, Yacc

Design and implementation of an experimental operating system and underlying architecture with basic features like multiprogramming, virtual memory and file system as part of developing a complete coursework for Operating Systems Laboratory. The project is hosted at [xosnitc.github.io](https://xosnitc.github.io). The project also included design and implementation of two language compilers, one for programming the operating system and one for programming application programs to run on this operating system.

**Compiler (July 2011 – November 2011)**

- **Environment** C
- **Tools** Lex, Yacc

A compiler for a Simple Integer Language (SIL). SIL included two basic data types Integer and Boolean, features like if, if-else, while, arrays and functions. Functions take any number of arguments and return a single value. Arguments can be passed by value or by reference. Function recursion is also implemented.

**Bulls N Bears (September 2011 – October 2011)**

- **Environment** HTML, PHP, CSS, MySQL
- **Tools** Adobe Photoshop

This project delivered the website <http://bullsnbears.tathva.org/>. It was a stock market simulation game as part of Tathva 11. The virtual market was synchronized with the actual NIFTY market. The players could buy, sell, short sell and cover equities over a period of 1 month.

**Stegobot in Google Plus (September 2012 – October 2012)**

- **Environment** Python, PHP
- **Tools** MATLAB

Implemented a Trojan Horse which steals saved passwords from Google Chrome, encodes them in images and spreads through Google Plus. The passwords are retrieved using a Google Plus / Picasa Application, which scans shared pictures for stolen passwords.

**Emart** (January 2011 – April 2011)

- **Environment** HTML, PHP, CSS, PostgreSQL
- **Tools** Adobe Photoshop

A simple Internet Shopping Platform. This project was done as part of undergraduate DBMS course.

**Library Management Software** (August 2008 – November 2008)

- **Environment** C++

A Library Management Software developed fully in C++. The database of the Software was implemented using the 'file' feature in C++. This project was done as part of Computer Science course of class XII.

#### **M.TECH THESIS**

- Working on Isolation Problem in Graphs under the guidance of Prof Raghunath Tewari.
- Studying about possibility of derandomizing isolation lemma for graphs which will lead to efficient parallel algorithm for matching in graphs. Also exploring the possibility of computing a min unique weight function for graphs which will give a UL algorithm for reachability

#### **RELEVANT COURSES**

- Approximation Algorithms
- Computational Complexity
- Computational Number Theory and Algebra
- Design and Analysis of Algorithms
- Linear Programming
- Maths for Computer Science
- Randomized methods in Computational Complexity

#### **AWARDS AND ACHIEVEMENTS**

- Was awarded the meritorious 0.1% certificate by AISSCE and AISSE for scoring 100 in Mathematics.
- GATE 2013 CSE All India Rank 42
- GATE 2014 CSE All India Rank 86