

WORK EXPERIENCE

Internship , Microsoft IDC

Summer '15

Guide: Akshay Prabhu (aprabhu@microsoft.com)

- Worked on an Application **CheckMark - Correction App** as a part of Microsoft's One India Education Initiative , aimed to ease the paper correction process for teachers
- Worked primarily on Canvas features , Annotations and Memory Managment for bitmaps in android
- Recieved a **Pre Placement Offer** at the end of internship

Software Developer, Shezartech

Summer'14

- Implemented a JEE Practice Engine with **ranking** of students by **detecting difficulty** of problems
- Implemented a web based **Learning Management System**

Entrepreneurship Project, Infermap

Nov'13-Dec'14

- Build a web portal aimed to help student chose their colleges by a college search engine

Web Manager, Students' Technical Activities Body IIT Bombay

Apr'14-Apr'15

- Developing and Managing the Website of STAB IIT Bombay with other web apps

ACADEMIC ACHIEVEMENTS

- Secured an All India Rank of **358** in **IITJEE 2012** among **5 lakh** aspirants
- Awarded **KVPY 2010-11** fellowship and attednded the prestigious **Vijyoshi Camp 2011** at **IISc, Bangalore** and **Summer Camp** at **IISER, Pune** organized by **KVPY**
- All India Rank **15** in National Cyber Olympiad , **21** in Mathematical Olympiad Conducted by SOF.
- Secured **3rd** Position in Codestruck , National Coding Competition conducted by Techfest,IITB
- Qualified for **ACM-ICPC 2013 & 14** Onsite round at Amritapuri site . Secured **10th position** in ACM-ICPC Khadagpur 14

TECHNICAL ACHIEVEMENTS

- Awarded **Tech Freshman Of The Year 2012-2013** among the **880** freshmen
- Built an Autonomous line follower and RC Bot in institute compitions and secured **1st and 3rd** respectively in year 2012

PROJECTS

QuizApp Server - R&D Project

Spring 2015

Guide: Prof. Bhaskaran Raman

- Designed a **Web Application and REST Framework APIs** for an App to conduct in class quiz with proper security mechanisms. Platform - PHP with MVC Framework Laravel
- Worked on various security aspects, **created a custom symbol font** for passcode authentication, proper **LDAP Authentication**, maintainence of states and logging all student event

Web Based Remote Desktop Connection

Autumn 2014

Guide: Prof. Varsha Apte

- Implemented a server client program using **Websockets** to implement a remote desktop connection
- **Authentication system** and **Auto Load balancing** was a part of this project

Transformer Modelling in OpenGL C++

Autumn 2014

Guide: Prof. Parag Chaudhury

- Built a model of transformer in OpenGL C++ along with interactive keyboard controls
- Created 3D environment and made a short movie using key-frame interpolation

Machine Translation - Natural Language to SQL Query

Autumn 2014

Guide: Dr. Pushpak Bhattacharyya

- Implemented schema dependent machine translation of Natural Language Query to SQL Queries **Statistically using Moses and Generic CFG Based adaptable to schema**
- Calculated accuracy to figure out CFG gives better result for schema dependent natural questions

Compilers

Spring 2015

Guide: Prof. Amitabh Sanyal

- Made a compiler for C like language using FlexC++ and BisonC++
- Incrementally achieved syntax analysis, syntactic check, AST Generation and Machine code generation

Implementation of Threads in GeekOS

Spring 2015

Guide: Prof. D.M. Dhamdhere

- Implemented **Kernel level threads** and **User level threads** in GeekOS - tiny OS kernel
- Worked on **Deadlock detection** and proper resource management with implementation of syscalls

Hard Disk Simulator

Autumn 2014

Guide: Prof. N.L. Sarda

- Modelled harddisk in C++ for simulation with **RAID 1** and HardDisk Cache mechanism
- Implemented **Elevator Algorithm** to minimize seek latency

Voice Controlled Bot and Biped

Summer 2013

Institute Technical Summer Projects

- Implemented **Hidden Markov Model** for the voice processing module. Coded in MATLAB involved algorithms like **Viterbi and Forward-backward algorithm**
- Built a self-designed **Remote controlled car** and a **Biped Bot** to work from voice commands

Sudoku Problem Generator and Solver

Autumn 2012

Guide: Prof. Abhiram Ranade

- Built a C++ based sudoku problem generator with varying difficulty levels
- The program solves most of sudoku puzzles with **self-developed algorithm** using sets and probability

TECHNICAL SKILLS

- Skilled in **C, C++, MIT-Scheme, Python, Java** with concepts of OOP and functional programming
- Skilled in Web Development and Scripting using **PHP, JQuery, HTML5, CSS3, AJAX, MySQL Web APIs, JSP, MVC Frameworks**
- Skilled in **Android App Development**
- Familiar with VHDL, Assembly Programming, BASH, MATLAB, L^AT_EX and Prolog

MAJOR COURSES UNDERTAKEN

- **Computer Science**
Data Structures and Algorithms, Abstractions and Paradigms in Programming, Automata Theory and Logic, Logic Design, Software Systems Lab, Graph Theory, Computer Architecture, Computer Networks, Database and Information Systems, Natural Language Processing, Computer Graphics, Compilers, Operating System, Artificial Intelligence, Computer and Network Security, Digital Image Processing
- **Others**
Calculus, Linear Algebra, Differential Equations, Introduction to Numerical Analysis, Modern Physics, Technology and Animation, Economics

INTERESTS AND EXTRA CURRICULARS

- I have been pretty active **freelancer** and have worked on a wide range of projects in areas as Web development, Artificial Intelligence projects and small bug fixes and server management
- Participated in **Microsoft Appathon Code.Fun.Do** to make an animator program
- Participated in **Yahoo HackU** and built a chrome extension in 24 hours to gather news, sports and weather data using **Yahoo Boss API** Yahoo Query Language
- Awarded the **1st Kyu (Brown Belt)** in Karate by Shito Ryu Karate-Do Federation
- Active user on online coding forums like HackerRank and SPOJ
- Interested in Web Development, Apps and designing algorithms for various coding problems
- Worked for Abhyasika as **teacher** for poor kids in National Service Scheme, IITB
- Extremely Interested in traveling and have done Parasailing, Trekking, River Rafting, Valley crossing and other activities.