



Prateek Chandan
Computer Science & Engineering
Indian Institute of Technology Bombay

120050042
UG Third Year (B.Tech.)
Male
DOB: 15-03-1995

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2015	8.67
Intermediate/+2	CBSE	DPS Bokaro	2012	95.80
Matriculation	CBSE	Sainik School Tilaiya	2010	9.60

ACADEMIC ACHIEVEMENTS

- Secured an All India Rank of **358** in **IITJEE 2012** among **5 lakh** aspirants
- Awarded **KVPY 2010-11** fellowship and attended the prestigious **Vijyoshi Camp 2011** at **IISc, Bangalore** and **Summer Camp** at **IISER, Pune** organized by **KVPY**
- Qualified **RMO-2011** : Regional Level Mathematics Olympiad sponsored by NBHM , Dept. of Atomic Energy , Govt. of India
- All India Rank **15** in National Cyber Olympiad , **21** in National Mathematical Olympiad and **51** in National Science Olympiad Conducted by Science Olympiad Foundation
- Secured **3rd** Position in Codestruck , National Coding Competition conducted by Techfest,IITB
- Qualified for **ACM-ICPC 2013** Onsite round at Amritapuri site and **ACM-ICPC 2014** at Amritapuri and Khadagpur site. Secured **10th position** in Khadagpur

WORK EXPERIENCE

Software Developer Intern, Shezartech

Summer 2014

- Implemented a web based JEE Practice Engine with **ranking system** of student by **detecting difficulty** of problems and also latex based question upload portal
- Implemented a web based **Learning Management System**

Technical Director & Developer, Infermap

Nov'13-Dec' 14

- Working as **Lead developer** and **Technical Director** at Infermap, web based education start-up launched in 2014 by IITB
- This is aimed to help student chose their colleges by a college search engine.

Web Manager, Students' Technical Activities Body IIT Bombay

Apr'14-Mar'15

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

TECHNICAL ACHIEVEMENTS

- Awarded **Tech Freshman Of The Year 2012-2013** among the **880** freshmen for being the most Outstanding fresher
- Built an Autonomous line follower, RC Soccer Playing Bot, RC Bot in institute competitions and secured **1st, 2nd and 3rd** respectively in year 2012

ACADEMIC 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
- Wrote the server in python with tools as pillow , xdotool , pykeyboard etc
- **Authentication system** and **Auto Load balancing** was a part of this project

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 of both these methods to figure out CFG gives better result than statistical methods for schema dependent natural questions

Transformer Modelling in OpenGL C++

Autumn 2014

Guide: Prof. Parag Chaudhary

- 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

Compilers

Spring 2015

Guide: Prof. Amitabh Sanyal

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

Implementation of Threads in GeekOS

Spring 2015

Guide: Prof. D.M. Dhamdhare

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

Hard Disk Simulator

Autumn 2014

Guide: Prof NL Sarda

- Implemented simulation of HardDisk with proper disks, tracks and sectors including **RAID 1** in C++ and along with proper **HardDisk Cache**
- The pointer movement used **Elevator Algorithm** to improve seek latency and the sector numbering had skewing mechanism to improve performance

Voice Controlled Bot and Biped

Summer 2013

Institute Technical Summer Project

- 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

C++ to Scheme Code Converter

Spring 2013

Guide: Prof Amitabh Sanyal

- Implemented **conversion** of basic C++ code into same functioning scheme code including few of the basic c++ libraries like math , string , stdlib etc

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 all type of sudoku puzzles with **self-developed algorithm** using sets and probability with a nice UI

TECHNICAL SKILLS

- Skilled in **C,C++**, **MIT-Scheme**, **JAVA**, **Python** with concepts of object-oriented programming and functional programming
- Skilled in Web Development and Scripting using **PHP**, **JQuery**, **HTML5**, **CSS3**, **AJAX**, **MySQL Web APIs**, **JSP** and other framework like **Laravel**(**PHP-based MVC Framework**), **Python Django**, **Java Servlet**, **Twitter Bootstrap** with knowledge Android Development
- Familiar with VHDL, Assembly Programming, BASH, MATLAB, XML, \LaTeX , and Prolog

POSITIONS OF RESPONSIBILITY

- Working as **Web Manager**, Students' Technnical Activity Body IIT Bombay
- **Convener of Web and Coding Club**, assisted the club manager in conducting workshops to promote coding culture and introduce latest technology among the students.
- Worked as **Cordinator** and **Organizers** in college festivals Mood Indigo and Techfest

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
- **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** and built an app with capability to add objects to canvas and write short code to animate them
- Participated in **Microsoft Build The Shield** , A hacking compitition and secured **15th position**
- Participated in **Yahoo HackU** and built a chrome extension in 24 hour 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
- Worked for Abhyasika **as teacher** for poor kids in National Service Scheme , IITB
- Interested in traveling and have done Parasailing, Trekking, River Rafting, Valley crossing and other activities.

Homepage : <http://www.prateekchandan.me>