Prateek Chandan
Computer Science & Engineering
Indian Institute of Technology Bombay

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B.Tech.
Male
DOB: 15-03-1995

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2016	8.63
Intermediate/+2	CBSE	DPS Bokaro	2012	95.80
Matriculation	CBSE	Sainik School TIlaiya	2010	9.80

WORK EXPERIENCE

Co-founder, Pickup — Jan'15 - Present
- Working as CTO to build algorithms and product for providing shared taxi services efficiently
- Developed web API's , android application along with a small team of developers

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
- Worked as **Technical Director** at Infermap, web based education start-up launched in 2014 by IITB
- 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, RC Soccer Playing Bot, RC Bot in institute compititions and secured 1st, 2nd 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, symentaic 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 NL Sarda
- Modelled hardisk 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, LATEXand Prolog

MAJOR COURSES UNDERTAKEN

- **Computer Science**
  Data Structures and Algorithms, Automata Theory and Logic,Graph Theory, Computer Architecture, Computer Networks, Database and Information Systems, Natural Language Processing, Advanced Computer Graphics, Compilers, Operating System, Artificial Intelligence , Computer and Network Security , Digital Image Processing , Digital Geometry Processing , Machine Learning
- **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 and animator program
- Participated in **Yahoo HackU** and built a chrome extension in 24 hour to gather news, sports and weather data using **Yahoo Boss API Y**ahoo 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.

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