Vaishnavh N

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Education

Program	Institution	Year	%/CGPA
B.Tech. in Computer Sci. & Engg.	Indian Institute of Techonlogy, Madras	2015	9.87/10.0 (Branch Rank 2)
XII CBSE	Sir Sivaswami Kalalaya Senior Secondary School, Chennai	2011	95% (1st in school)
X CBSE		2009	97.8% (2nd in city)

Scholastic Achievements and Awards

- Secured **AIR 70** (All India Rank) and State Rank 3 in IIT-JEE 2011 - **AIR 56** in the AIEEE (All India Engineering Entrance Examination) 2011 - **AIR 16** in ISAT (Indian Institute of Space Science and Technology Admission Test) 2011
- Among **top 0.1%** of successful candidates of AISSCE (All India Senior School Certificate Examination), 2011 in **Mathematics**
- Qualified for national level olympiads in **five different fields** based on outstanding performance in their respective preliminary rounds
  - Indian National Olympiad in **Informatics** (INOI 2010)
  - Indian National **Mathematics** Olympiad (INMO 2010) - qualified directly for INMO 2011 on the basis of performance in Regional Math Olympiad 2010
  - Indian National **Physics** Olympiad (INPhO 2011) - in national **top 1%** of 38994 candidates
  - Indian National **Astronomy** Olympiad (INAO 2011) - in national **top 1%** of 10900 candidates
  - Indian National **Chemistry** Olympiad (INChO 2011) - in **top 35** out of 31,150 candidates - also qualified further for Orientation and Selection Camp (Summer 2011) held at Homi Bhabha Centre for Science Education (TIFR)
- **KVPY** Fellowship Awardee, 2009 - instituted by **Indian Institute of Science**
- Awarded Amul Vidya Shree and Amul Vidya Bhushan by Gujarat Co-operative Milk Marketing Federation for **academic excellence** in tenth and twelfth standards

Skills

- **Programming Languages:** C/C++, Java, Python, Matlab, R, Verilog
- **Miscellaneous:** LATEX, Git, MySQL, Mongo, Flex/Bison, Ruby on Rails, Android Development
- **Operating Systems:** Proficient in Windows and Linux environments

Projects

- Two-month summer internship (May-July 2013) at **Report Bee Edusys Private Limited** (an IIT Madras incubated company) involving **mathematical modelling** and **visualization of data**
  - Ideated and developed a formula (from scratch) for an index to measure a student's learning, under the mentorship of *Dr. Madhavan Mukund* **(Chennai Mathematical Institute)**
  - Programmed in R to analyze the formula developed and to perform automated computational work in other projects
  - Worked with MySQL and MongoDB database systems
  - Programmed in Ruby on Rails framework to set up interface between R and existing RoR codebase and integrate the index with the web application
- Study of basic **Map Reduce** model under the guidance of *Prof. John Augustine* (Dept. of Computer Science and Engineering, IITM) (during 4th semester) involving reading and discussion of published papers
- **Mobile application development** for the institute (2012-2013) as part of the newly-formed five member team aimed at developing an application for handy and easy access to necessary information of the institute

Coursework

Key Courses:
- **Programming, Math and Theory** : Basic Graph Theory - Introduction to Machine Learning - Languages, Machines and Computations - Data Structures and Algorithms - Paradigms of Programming - Discrete Mathematics for Computer Science - Calculus: Functions of One and Several Variables - Probability, Statistics and Stochastic Process
- **Systems** : Language Translators - Computer Organization - Operating Systems (along with MIT-OCW Operating System Engineering) - Switching Theory and Digital Design - Introduction to Database Systems

Course Projects
- Designed and implemented a Selection Sorter by implementing various digital modules in Verilog, simulating them in Xilinx ISE and synthesizing the same on the Spartan6 FPGA board.
- Building a compiler that translates code from MiniJava to machine language.

Co-Curricular Activities

- One among the **top 150** candidates selected for Round 3 of National Programming League (NPL) NIT Warangal from 10,000 participants
- Active member of SPOJ (Sphere Online Judge) - solved 142 problems (current **world rank 1783**)
- Ranked **278** in ACM International Collegiate Programming Contest (2012), Asia Multisite Regionals Amritapuri

Extra-Curricular Activities

- Participant in the CSIR Programme on **Youth for Leadership in Science** conducted by Structural Engineering Research Centre (Council of Scientific and Industrial Research) in 2009
- **National Service Scheme Volunteer** (2011-2012) involved in various projects such as *Scientific Toys and Assistive Technology* and *Magazine for School Students*. Chosen as a **Star Volunteer** for enthusiastic participation.
- **Scribe** for the students of **Vidya Sagar** (formerly, the Spastic Society of India), X Standard NIOS 2008
- 1st in district and 2nd in state-level MaRRS/Cambridge University Press International Spelling Bee championships (2006-2007)
- **All India** 4th in World Wildlife Fund (India)/Intel Earth Day Essay Competition (2007)

Objective

To secure an internship that will be an enriching experience for me to develop my interest in Machine Learning and my passion for research.