

Preetham Sreenivas

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Education

Indian Institute of Technology, Bombay

July 2011 - May 2015

Bachelors of Technology

Major : Computer Science and Engineering

Key Courses : Artificial Intelligence, Machine Learning, Applied Algorithms for Large Data, Parallel Computing, Graph Theory, Databases, Advanced Databases

Experience

Software Engineer

July 2015 - Present

Directi, Mumbai

- Developed a system similar to Google News using clustering algorithms and text feature extraction
- Involved with the core ad serving team. Responsible for developing prototypes for managing various bottlenecks.
- Converted a critical component of a core api into node.js which cut it's response times to one-fourth

Internships and Research Experience

Emulator Cloud

Summer 2014

Internship, Shinoj Zacharias, IBM India

- Developed a prototype for Emulator Cloud - A farm of android emulators running on the cloud which is one of the vital components of IBMs upcoming Mobile testing as a service (mTaas).
- Worked with Java, REST, IBM UrbanCode Deploy and the autoscaling features provided by Softlayer Cloud.

Prediction Models for energy consumption of servers

Autumn 2014

B.Tech Project, Prof. Umesh Bellur and Prof. Purushottam Kulkarni, CSE, IIT Bombay

- Memory subsystem takes about 20% of the total power. Research project aims at understanding energyconsumption of servers using PMUs to monitor workloads and build an accurate prediction model taking into account the power consumed by the memory subsystem which is ignored by existing models
- Involved working with kernel programming, machine learning and power measurement instruments.
- Green Computing - Using this model, the research aims at developing power and cost efficient virtual machine placement techniques in computing clouds and data centres.

Scholastic Achievements

- Secured **All India Rank 10** in **Indian National Mathematics Olympiad**, was invited to the International Mathematics Olympiad Training camp for being in the top 30.
- Awarded **Gold Medal** for being in the top 35 of the country in **Indian National Chemistry Olympiad** and was invited to the Orientation-cum-selection-camp for International Chemistry Olympiad.
- Secured **All India Rank 9** in VITEEE out of 200,000 students.
- Secured **All India Rank 344** in IIT-JEE out of 520,000 students.
- **Ranked 14** in Mathematics Talent Test conducted by Association of Mathematics Teachers of India.
- Secured **State Rank 1** in Science Talent Search Exam conducted by A.S.Rao Awards Council.
- Secured **high distinctions** for two consecutive years in IAIS (International Assessments for Indian Schools) conducted by University of New South Wales, Australia.

Academic Projects

Artificial Intelligence

Spring 2014

Artificial Intelligence, Prof. Pushpak Bhattacharya, IIT Bombay

- Presented a seminar after conducting a literature survey on Turing test and emergence of Chatterbots

- Implemented feed forward neural network with backpropagation and used it for sentiment analysis over twitter feed and various test data
- Implemented A* algorithm to solve 8-puzzles problem and compared different heuristics and bi-directional search

File System Implementation

Spring 2014

Operating Systems, Prof. Dhananjay Dhamdhare, IIT Bombay

- Designed and developed a fully functional file system having its own data block allocation scheme, directory structure, IO cache and permission control
- Implemented system calls to read, write, create, delete and move files, folders and links

Control Flow Graph Language Processor

Spring 2014

Implementation of Programming Languages, Prof. Uday Khedkar, IIT Bombay

- Redesigned a compiler to generate executable MIPS assembly code from GCC tree cfg (Control Flow Graph) dumps
- Enhanced the basic implementation to provide support for Floating point numbers, common arithmetic operations, intraprocedural control flow statement

Readers Zone

Autumn 2013

Databases and Information Systems, Prof. Umesh Bellur, IIT Bombay

- Developed a web application similar to GoodReads on php, mysql
- Designed the ER model, converted them into Relational Model and normalized the entities used for storing the users & books data along with the relations

Buffer Overflow

Autumn 2013

Computer Architecture, Prof. Bernard Menezes, IIT Bombay

- Buffer Overflow is a software vulnerability where a program, while writing data exceeds its boundary and overwrites adjacent memory
- Exploited the same anomaly and implemented the buffer overflow attack in C++

Text Only Web Browser

Autumn 2012

Processor Design, Prof. Varsha Apte, IIT Bombay

- Developed a terminal based text-only web browser
- Used the text to tag ratio in a web-page to extract text and render it

Technical Skills

Operating Systems : Windows, Linux

Programming Language : C, C++, Java, Python, Scheme

Software Proficiency : Shell scripting, Eclipse, Scilab, LaTeX, SQL

Web : HTML, CSS, PHP, REST, SOAP.

Extra-Curricular Activities

- VR1 Organization - Core Member of vr1forever , an NGO with a mission to bring harmony in the society. It currently provides home to hundreds of orphans and provides them with value-based education, Helps empower youth in India by conducting various workshops, Activities.
- Attended Basic Mountaineering Course conducted by ABVIMAS for a period of 26 days in the Himalayas
- Proficient in Indian classical Violin
- Represented Hostel 8 at the Institute Football General Championship and Institute Badminton General Championship.