Sarvesh Ranjan

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Education

IDD Computer Science and Engineering with Speicalization in Information Technology

July 2010 — Present

Indian Institute of Technology Roorkee

Work experience

Cisco Systems, San Jose

Cisco International Internship Program Intern

Worked on projects in the field of Openstack and Data Science like PlaceWise: A smart (multi-) cloud resource placement recommendation engine and service, Ceph Read and Write Optimization, Cisco Zeus UI, Anomaly detection on multi-dimensional metrics etc.
Was part of team Webex++ which won HactIT V Data Science hackathon in Cisco, San Jose.
Also got to participate in Openstack summit in Vancouver in May 2015 as a speaker and talked about Demystifying Logs in OpenStack Clouds.

Wipro Technologies

Summer Intern

I worked on a project to create Erasure coding and improve the performance of methods used by Microsoft Azure. We used Reed-Solomon coding and decreased the amount of replication we need to create a Multi level, Multi-Tier Block and Object storage system which is highly scalable and reliable without increasing the cost of storing extra data.

Impetus Infotech India Pvt. Ltd.

Summer Intern

The aim of this project was to devise an algorithm for MapReduce framework. The algorithm focused on rescheduling of hadoop jobs using code realignment and then created a DAG. The algorithm then rescheduled the SQL queries and jobs using this DAG. This algorithm was then implemented in the profiler of JumbuneTM, product of Impetus Technologies, Inc. I later used this algorithm to design a task executor. This implementation was released with the binaries of Hive.

IBM India Research Lab

Research Intern

To derive algorithm and variables for Job Data Normalization from unstructured job descriptions to find similar jobs and draw insights using Natural Language Processing (NLP).

Projects

- **Implementation of an assembler for a SIC/XE machine**

This is the design of a basic Assembler coded in C++. The program was designed to read a file containing SIC or SIC/XE programs. It was designed to compile the code and generate the Symbol Table, Machine Code, Object Code,

Argument Table and Definition Table.

· **Study of PIC Microcontrollers and Implementation using HI-TECH C compiler**
The aim of the project was to study micro-controllers especially PIC micro-controller, its complete instruction set, identifying missing op-codes and also programming it for the Railway Signalling System using MPLAB IDE to work with HI-TECH C compiler. This system also implemented the timer functions and considered priority of the trains while assigning them platforms.

· **Camouflaged Target Reconstruction using Digital Image Processing**
An algorithm was devised to reconstruct camouflaged target using OpenCV. This algorithm calculated SIFT and SURF features in real time to support the reconstruction process.

· **Implementation of Railway Signalling System in VHDL**
Implemented the railway signaling system using VHDL as my Embedded Systems project. The system has multiple tracks and I implemented the logic of assigning the platforms to the trains according to their priority and platform availability.

· **Fast Algorithms for Frequent Item set Mining using FP-Trees**
Worked on a novel FP-array technique that greatly reduces the need to traverse FP-trees, thus obtaining significantly improved performance for FP-tree-based algorithms.

· **Web Server Selection**
This project was based on the design on a mathematical model for web service recommendation system for user based on the concepts of artificial intelligence. We devised a mathematical formula to help the client in optimal web server selection based on BW and locality.

· **Cisco Internal Webex Social Recommendation System (Webex++)**
WebEx++ is a continually improving knowledge base of posts, questions and answers created, edited and organized by everyone who uses it. Equipped with the advanced techniques of Machine Learning and NLP, it is a platform that will enable our employees to share their knowledge, questions, ideas and expertise.

Qualifications

- An excellent problem solver, able to quickly grasp complex problems and create robust algorithms to solve them.
- Experience in competitive programming in python and C++ at platforms like Topcoder, Codeforces, Codechef and ACM ICPC.
- Winner: HackIT V Data Science Hackathon by Cisco in San Jose site.

Hobbies

- Photography
- Playing Table Tennis

References

Dr. Balasubramanian R.
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