Kapil Agarwal

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OBJECTIVE

Seeking summer internship in Software Engineering for the period of May-Aug 2015.

EDUCATION

Georgia Institute of Technology, Atlanta, GA   Aug 2014 to May 2016
Master of Science in Computer Science   Specialization: Systems
Courses: Advanced Operating Systems, HPC Tools & Applications

Indian Institute of Technology, Roorkee, India   May 2014
Bachelor of Technology in Computer Science & Engineering   CGPA: 8.872 on a scale of 10
Courses: Advanced Computer Architecture, Network Programming in Unix, Data Mining & Warehousing

TECHNICAL STRENGTHS

Programming Languages: C, C++, Java, Python, PHP, HTML, Javascript
Databases: MySQL, PostgreSQL
Tools: Git, Vim, Visual Studio, Eclipse

EXPERIENCE

SDE Intern, Amazon India Development Centre, Hyderabad, India   May 2013-July 2013
- Added selective audit feature to the Event Bus service, based on Publisher-Subscriber model, whereby events are stored in AWS S3 and Cloud Search is used for searching those events. Also used AWS SNS and SQS for sending and receiving the events.
- Developed and deployed a Self-service tool to manage subscriptions and a user interface for searching and republishing the events. The service is developed using Java and JSP was used for the backend.

Intern, Centre for Development of Advanced Computing, Pune, India   May 2012-July 2012
- Worked with the High Performance Computing group to develop low level benchmarks for health monitoring of GPU devices on a message passing GPU cluster with NVIDIA GPUs and AMD APUs.
- Developed suites of Device Query, Bandwidth measurement, Matrix computation performance analysis programs using MPI and CUDA/OpenCL programming.

PROJECTS

Prediction and Analysis of Complex Data Using Data Mining Techniques   Undergraduate Thesis
- Designed a technique to give product recommendations to a new user based on the relationship between user ratings of the products and the user characteristics.
- Used unsupervised learning methods for clustering similar users. It was implemented in Python.

Anomaly Detection and Similarity Search in Time Series Data   Research Project
- Developed a technique to detect anomalous time series among multiple time series based on the idea that similar time series would have similar variation in their slopes in corresponding time intervals.

Lectures & Tutorials   Web Development
- A web application for faculty to upload lectures, tutorials, exam papers and its solutions for students to access over the intranet. Developed using PHP and MySQL. One of the most used apps in IIT Roorkee.

Kriti   Web Development
- A web application for students to upload original paintings, photographs, poems and essays and get feedback from their peers at IIT Roorkee. Videos and e-magazines can also be uploaded.
- Developed using Python for the backend and PostgreSQL as the database. Integrated jwplayer for playing videos and flex paper viewer for displaying e-magazines.

RESEARCH PUBLICATION

Agarwal, Kapil, et al. "**Anomaly Detection and Similarity Search in Neutron Monitor Data for Predictive Maintenance of Nuclear Power Plants.**" Advanced Computing, Networking and Security (ADCONS), 2013 2nd International Conference on. IEEE, 2013.