Jayesh Kawli

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CAREER OBJECTIVE

Seeking a full time position in the Software Design and Development field that will utilize my skills and abilities and offer organizational and professional growth while being innovative and flexible.

EDUCATION

Indiana University, Bloomington, IN
Master of Science in Computer Science — Cumulative GPA: 3.6/4.0 — Expected *May 2013*

Mumbai University, Mumbai, India
Bachelor of Engineering in Computer Engineering — Cumulative GPA: 3.6/4.0 — *June 2010*

WORK EXPERIENCE

Indiana University School of Informatics and Computing, Bloomington, IN *August2012-Present*
Associate Instructor (Analysis of Algorithms)
- Assisted Professor Paul Purdom for graduate level course Analysis of Algorithms
- Held office hours and doubt solving sessions

Hope for Women Magazine, Muncie, Indiana
Web developer (Development and Design) *May 2012 – August 2012*
- Responsible for developing the Word Press Conference website utilizing knowledge in HTML, Word Press and CSS
- Showed an ability to multi-task in a fast-paced environment and gained comprehensive web development experience

Tata Consultancy Services, Pune, India
Assistant Systems Engineer (Banking and Financial Services) *August 2010 – June 2011*
- Worked on problems and solutions related to DB2 and Mainframe system for Real Time debit card transaction system
- Gained in depth practical experience in project management by verifying its functionality in Test and Quality analysis phase
- Gained advanced technical knowledge of Mainframes and DB2 by troubleshooting the various business issues and performance glitches in implementation
- Involved in strong communication and negotiation skill through interaction with managers and client

Technical Skills

Languages: C, C++, Java, PHP, MATLAB, R, COBOL, Python, Perl, Ruby, JCL
Platforms: Microsoft Windows, OS/360, Linux
Web Development: HTML5, CSS3, JavaScript, DHTML, Ajax, Jquery
Databases: Oracle9i, DB2, PL/SQL, MySQL

Related Coursework: Analysis of Algorithms, Distributed Systems, Advanced Database Management System, Computer Vision, System and Protocol Security and Information Assurance, Data Mining, Computer Networks, Cryptography

Academic Projects:

Page Rank Algorithm (Java) – Sep 2012
- Implemented sequential page rank algorithm to evaluate top 10 most important web pages from the set of 1000 URLs.
- Developed parallel version of the page rank algorithm using MPJ to improve its performance
- Tested and analyzed the algorithm using SIGAR and ActiveMQ libraries with input of more than 1 million URLs on more than one distributed nodes
- Analyzed performance and behavior under different operating parameters. Stood among top 3 project teams in class

Social networking website (PHP, JavaScript, HTML 5, CSS3) May - 2012

- Developed a social networking website using Ajax, PHP and other web development tools
- Implemented chat and Private Messaging capability
- Integrated website with many Facebook and Twitter based features

RANSAC (Random Sample Consensus) algorithm (C++) Mar – 2012

- Implemented RANSAC algorithm for Image stitching and Panorama Creation using C++
- Tested on different real world with successful results on a set of more than two images
- Also implemented feature extraction using Tomasi and Harris corner detection as a part of preprocessing to RANSAC implementation

Geo Location detection from images (C++, MATLAB) May - 2012

- Implemented and analyzed Geo location detection algorithm in C++
- Experiment was based on a paper by Prof. Frode Erika Sandnes 'Determining the Geographical Location of Image Scenes based on Object Shadow Lengths'
- Tested algorithm at Bloomington, Indiana and achieved significant geographical accuracy

K-Means data clustering algorithm (C++) Sep - 2012

- Implemented and analyzed K-means data clustering algorithm on 'Wisconsin breast cancer data'.
- Used 10-fold cross validation method to verify its correctness on unlabeled data. Performed unsupervised learning

Naïve Bayes algorithm on fraudulent sales data (C++) Nov - 2012

- Implemented and analyzed simple probabilistic Naïve Bayes data classification algorithm on fraudulent sales data
- Executed algorithm on more than 4 lakh input records with approximately 15000 training and 3.5 lakh test records
- Observed more than 90% final accuracy on final classification model by applying it on training data of known labels
- Obtained accuracy of more than 95% for K-means classification algorithm on classified records

Port Scanner (C) Oct - 2012

- Developed a simple port scanner with Full IPv4 and partial IPv6 support with PCAP - packet capture library
- While working on this project, studied the interplay of various implementations of firewalls, transport protocols and operating systems
- Added multi-threading support for faster implementation on multiple ports
- Verified standard services such as SSH, HTTP, SMTP, POP, IMAP and WHOIS if they are indeed running on respective ports

Football player recruiting website (PHP, HTML, CSS, jquery) July - 2012

- Developing an American Football website as a platform for recruiting upcoming high school and college players
- Allows players to upload their profile and other recruiters to search for players with desired skills
- Integrated functionality such as private messages exchange, broadcasting, building personal profile and Ajax based dynamic search (Used PHP, JavaScript, HTML, DHTML, MySQL and jquery)
- Currently under development and expected to be fully functional at the end of current year

Depth Map Estimation from 2-D images (C++) Mar – 2012

- Created a simple disparity and depth map for pair of 2-Dimensional images using Hidden Markov Model
- Created disparity map for given pair of images using pixel window and minimizing sum squared error between them
- Depth map was created using Markov Random fields using bidirectional message passing technique between two neighboring pixels

Survey Paper:

Analysis of Open Flow Network (Network security) Apr – 2012

- Wrote a survey paper to study, analyze and find any kind of vulnerability in the Open flow networks
- Analyzed the root causes of earlier attacks occurred - cause of a major network disruption
- Designed and explained threat model in survey paper