**Jayesh Kawli**

**720S.College Mall Road, Apt. B4 Bloomington IN 47401**

**jkawli@indiana.edu (419) 285-6105**

**CAREER OBJECTIVE**

Seeking a full time position in 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 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 as a part of performance improvement
* Analyzed behavior using SIGAR and ActiveMQ libraries with 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
* Features were extracted using Tomasi and Harris corner detection algorithm as a part of preprocessing
* Tested on different real world with successful results on a set of more than two images

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

* Implemented and analyzed Geo location detection algorithm
* 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
* Observed more than 90% accuracy on final classification result.

**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 with known labels

**Port Scanner (C) Oct - 2012**

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

**Football player recruiting website (PHP, HTML, CSS, jquery, JavaScript, MySQL) 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, building personal profile and Ajax based dynamic search
* 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
* Disparity map was created for a given set of images using pixel window and minimizing sum squared error
* Depth map was built using Markov Random fields using bidirectional message passing technique between two neighboring pixels

**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 (DOS, Spoofing) - cause of a major network disruption using threat model

**Leadership Experience:**

**Volunteer**

Worked as a volunteer in the Treasure Hunt tournament held in the college festival in 2006

Assumed a role of publicity manager for college event in 2008

**Organizer**

Organized a PHP based inter team virtual tournament ‘Lock, Stock and trade’

Worked as an organizer in the intercollegiate Group Discussion event ‘Walk the Talk’