**Jayesh Kawli**

**720 S. 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: 3.64/4.0 *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, Indiana*August2012-May2013*

*Associate Instructor (Analysis of Algorithms)*

* Assisted Professor Paul Purdom for graduate level course Analysis of Algorithms
* Held office hours and doubt solving sessions

**Hank’s College Football Recruiting,** Bloomington, Indiana*July2012-January2013*

*Web Developer (PHP, HTML, CSS, jquery, JavaScript, MySQL)*

* Developed a football players recruiting website as a platform for upcoming high school and college players
* Allowed players to upload their profiles 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
* Gathered strong professional experience with web based software and database development

**Tata Consultancy Services**, Pune, India *August 2010–June 2011*

*Assistant Systems Engineer (Banking and Financial Services)*

* 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, JSP

**Platforms**: Microsoft Windows, OS/360, Linux

**Web Development**: HTML5, CSS3, JavaScript, Dynamic HTML, Ajax, Jquery, Google Web toolkit, Node.js

**Databases**: MySQL, Oracle9i, DB2, PL/SQL, SQLite

**Miscellaneous**: Apache Tomcat, JUnit, Mockito, Agile development, GitHub, Jenkins, Maven, Eclipse, NetBeans

**Related Coursework**

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

**Academic Projects**

**Page Rank Algorithm (Java) –** *Sep 2012*

* Implemented sequential page rank algorithm to evaluate top 10 most important web pages from a set of 1000 URLs
* Developed parallel version of the page rank algorithm using MPJ to improve performance
* Analyzed behavior using SIGAR and ActiveMQ libraries on 2 million URLs situated on more than one distributed nodes
* Efforts of our team lead us to stand among top 3 project teams in a 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 along with capability to friend and unfriend people
* Integrated website with many Facebook and Twitter based features
* Gained valuable insight regarding how simple programming languages can be utilized to provide excellent features

**RANSAC (Random Sample Consensus) algorithm (C++) -** *Mar 2012*

* Implemented RANSAC algorithm for Image stitching and Panorama Creation
* Project included extracting image features using ‘Tomasi and Harris’ corner detection algorithm
* 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 to capture physical location from object shadows
* Experiment was based on a paper by Prof. Frode Erika Sandnes ‘Determining the Geographical Location of Image Scenes based on Object Shadow Lengths’
* Successfully verified this algorithm at Bloomington, Indiana and achieved a significant statistical 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

**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

**Web crawler and Document parser (Perl) -** *May 2012*

* Developed a web crawler to download and parse URL content using Perl regular expressions
* Stored URLs in MySQL database and iteratively added multiple of them as they were found on successive links
* Used similar logic to extract and store email ids from a group of input webpages

**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

**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’