**Vivek Tiwari**

2632 Ellendale Place, Los Angeles, CA 90007   (213) 675-3993
vivektiw@usc.edu | https://www.linkedin.com/in/vivek-tiwari-3ba46321
Website:http://www-scf.usc.edu/~vivektiw/

## Technical Skills and Endorsement

| | |
|---|---|
| Languages | Java, Python, JavaScript, R |
| Web Technologies | HTML5, CSS, SASS, Angular.js, Backbone.js, Hadoop, MapReduce |
| Database: | PostgreSQL, PostGiS, SQLite, MySQL |
| Applications | Eclipse, JIRA, Jenkins, HPQC, Phone gap, |
| Operating System | Windows Family, Mac, Android, iOS, Unix |
| SCM | TFS, SVN |
| Others | Json, XML, KML, Ajax |

## Academic Project

**Data Analysis Using Hadoop & Map Reduce (USC):**
- Analyze logs from the web server and to implement MapReduce jobs on multiple clusters to identify ip address, pages that are accessed most. Furthermore, performed ETL, data processing and analytics using R and WEKA to get further insight from the collected data.

**Artificial Intelligent Game (USC)**
- Developed an Artificial Intelligent Agent to play 5*5 Matrix Board Game in python, Agent selects the next move by first plotting a game graph and then selecting the next move using Adversarial search (Minimax search, Alpha Beta Pruning).

**Inference Engine (USC)**
- Developed a knowledge base from First Order Logic Clauses. Implemented backward chaining algorithm to infer answer to the logical queries posed to the system and the logs in order of which queries are processed.

**Influence Diagram (Bayes Net) (USC)**
- Developed Bayesian network from the given a set of nodes (Chance node, Decision node, etc.) in a file. Implemented variable elimination algorithm in python compute conditional, marginal probability, expected utility and Maximum Expected utility in the network.

**Spatial Data(USC)**
- Implemented K-nearest Algorithms using PostgreSQL and PostGiS to compute k-nearest neighbor from the initial location and write the output to the. KML file. Display the place marks, convex hull and the output of the K-nearest SQL implementation on the Google Earth.

**Symbiotic Relationship between R and WEKA(USC):**
- Created four set of clusters consisting of 100 points each in R language. Visualize each cluster within a unit square in R console and generate. arff format file. Used. arff file to generate cluster using SimpleKmeans algorithm and to visualize the clusters in WEKA tool.

**Text Editor (Undergrad Project)**
- Designed Text Editor using JavaScript that enables end user to perform various operations such as Text Formatting, Find & Replace, Undo and Redo. It also has advanced features like Data Transformation which allow to load and merge content from external file. Language: JavaScript.

## Work Experience

Senior System Engineer, Infosys Technologies Ltd, India      23 July, 2012 – 10 Nov,2015
- Designed and developed backbone based MVC Framework for Ricoh that decreased development cycle by 50 percent. I was responsible for designing MVC framework, WebSql schema to provide offline data storage, localization, Centralized handling of error management.
- Implemented "Add to cart Functionality" for one of the biggest US E-commerce Retailer using Angular.js and front end technologies. My responsibilities include integrating the existing UI into the framework and implement the logic to achieve Mobile Cart functionality.
- Developed MVC components for the Hybrid Enterprise web application using Angular.js and Phone gap. Developed custom plugins to read and write data in the pdf format to cater the need of various mobile operating system.
- Design and develop 3D 9*9*9 cube in Android operating system using OpenGL for one of the world largest Oil Field Service company. The application is mainly used for data analysis using slicing and dicing technique.

Winter Intern, Infosys Technologies Ltd, India      26 Jan, 2012 – 21May,2012
- Designed and developed android based "Free hand drawing application: SketchDroid". Developed and implemented algorithm that supports canvas, touch screen gesture features in mobile devices.

Summer Internship, HCL Technologies, India      05 Jun 2011 – 20 July 2011
- Designed and developed Incident reporting management portal (IRMS: Web Portal) using HTML, CSS, JavaScript, PostgreSQL that helps employees to keep track of all the incidents that are resolved or are in open state. Furthermore, it helped HCL to increase the learning curve of their employees about an incident by 42%

## Education

**University of Southern California**      01 Jan, 2016 – 30 Dec, 2017

MS Computer Science

(Analysis of Algorithm, Artificial Intelligence, Database Systems)

**Graphic Era University, Dehradun**      10 Aug, 2008 – 28 Jun, 2012

Bachelor of Technology Computer Science

(Data Structures, Web Technology, UI Design, Mobile OS)

## Certification & Research

- Published a research paper on Negative association rule in Data Mining published in in Mathematics In Engineering, Science an Aerospace.
- Microsoft Certified in 480 Programming in HTML5 with JavaScript and CSS3.