VENKAT SAMBANDHAN

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EDUCATION

Indiana University, Bloomington, USA May 2017
Master's Degree: Computer Science, CGPA: 3.78/4.0
BMS College of Engineering, Bangalore, India May 2013
Bachelor of Engineering, CGPA: 8.98/10.0

TECHNICAL SKILLS

Programming Languages: C, C++, Java, PHP, HTML5, CSS, JavaScript, JQuery, UNIX, Bootstrap, REST, and JSON.
Database: MySQL, PostgreSQL, HBase
Tools/Applications: Eclipse, Spring, Hibernate, Hadoop, Websphere, Bugzilla, Jenkins, Anthill, Laravel, SOAP, R Studio, LAMP, Cascade servers, WCMS, WordPress, XML.

EMPLOYMENT

IU Communications | Developer | Bloomington IN, USA Aug 2016 - Present

- Developed SSO authentication using CAS server for Indiana University applications, making it more secure.
- Designed a WordPress-style CMS for various branches of Indiana university, which reduced the complexity for the designers.
- Automated the migration of IU data from small box to in-house servers using PHP scripts, reducing data outsourcing cost by 30%.

VIGEO Inc. | Software Engineering Intern | Bloomington IN, USA Jun 2016 - Jul 2016

- Designed and implemented the database for the event management application with efficient version control using Python Flask and PostgreSQL, making it less susceptible to developer errors.
- Developed a microblogging application prototype with customized pagination making the API return only the required articles.
- Implemented an optimization tool called profiler, where the profiler reports the running time of every function, making it simpler to optimize the code.

TATA CONSULTANCY SERVICES | Associate Systems Engineer | Bangalore, India Dec 2013 - Jul 2015

- Built a JAVA application for online test taking using Spring MVC and LDAP for admin login.
- Automated batch jobs for generating credit score using user transaction data, thereby reducing manual work by 100%.
- Managed the configuration and change management systems which performed build, deployment and testing to maintain consistency and track changes using Jenkins and Anthill.

PROJECTS

K-Means Algorithm Sep 2016

- Designed a k-means algorithm in data mining, on Wisconsin breast cancer data-set for the healthcare community.
- Enhanced the algorithm to avoid k-way ties and centroid collapse, to calculate the error rates and perform data visualization.

Social Networking Website: CIRCULUS May 2016

- Developed a QUORA-style webapp using JAVA, Spring, Hibernate and SQL, following waterfall model.
- Designed the wireframe for front-end and constructed the core back-end including the databases.

Restaurant/Lodging Online Reservation System Apr 2016

- Developed an accessible website using HTML5, CSS, JavaScript and JQuery which is hosted at: http://vishnusagar.herokuapp.com
- Collaborated online home delivery and room reservation facilities in this site using PHP and MySQL.

Search Engine Mar 2016

- Constructed a Search Engine using Hadoop, HBase and Lucene for indexing, which enabled quick search.
- Applied the concepts of PageRank and FrequencyIndexBuilder algorithms.

Server Client Application Nov 2015

- Created a server client application in TCP and UDP using C and socket programming.
- Ran the web server program to handle a HTML file, which also supported TCP persistent and non-persistent connections.

A Comparative Study on Maximum Flow Algorithms Sep 2015

- Performed a theoretical and practical analysis on max flow algorithms like Ford–Fulkerson, Dinic's and Push-Relabel.
- Implemented these algorithms against large non-terminating networks and visualized their performances.

XINU Operating System Oct 2016

- Used semaphores and futures as a mechanism to synchronize on asynchronously produced data, potentially improving the ability to manage concurrent activities efficiently. Added FUTURE_SHARED and FUTURE_QUEUE modes for threads.
- Building Xinu operating system in C and familiarizing with the kernel, scheduler, memory management system, device drivers, and hardware architectures (Beagle Bone).

PUBLICATIONS

"**Line Differential Protection in an Optic Fiber**" in International Journal of Engineering Research & Technology Nov 2013
(Volume 2 – Issue 11)