Sandesh Singh

📟 +1 347-687-7748   ✉ me@sandesh247.com   🖮 http://sandesh247.com

EDUCATION

Master's in Computer Science   Expected Spring 2012
GPA 4.0, Stony Brook University

Courses Algorithms, Natural Language Processing, Computational Biology, Words and Pictures, Concurrent and Distributed Algorithms

Bachelor of Engineering (Computers)   Jun 2006
First Class, Vidyavardhini College of Engineering and Technology

Courses Artificial Intelligence, Advanced Databases, Operating Systems, Computer Networks

SKILLS

Languages
· proficient in C#, Python, Java, Javascript, Bash
· working experience with C++, Ruby

Data
· classification and mining with Weka, numpy, NLTK, learning R
· data mining on Microsoft Analysis Services with MDX/DMX, SQL

Frameworks
· OR Mapping frameworks (NHibernate, Microsoft Entity Framework, Gentle.Net)
· Web frameworks (Google AppEngine, ASP.Net, Django, Google AJAX API, jQuery)

CAREER

Technical Leader, Neorithm Technologies   Oct 2008 - July 2010
Core team member since inception, led the technology R&D across the company's product lines

Senior Software Engineer, Finacus Solutions   Nov 2007 - Aug 2008
Core team member, enabled rapid application development with an in-house framework

Subject Matter Expert, Amdocs Development Center (India)   Aug 2006 - Oct 2007
Implemented Amdocs' telecom billing functionality using Unix processes

PROJECTS

Vandalism detection in Wikipedia   **Stony Brook University**
We proposed an NLP approach to detecting vandalism, by modeling edits and vandal edits using a probabilistic context free grammar, and used the model to evaluate new edits. We attained 84% precision and 89% recall.

Pattern recognition in human speech   **Stony Brook University**
I built a classifier to detect the language of a human speaker, by building an ngram model over various features of an audio signal. The classifier attained an accuracy of 72% and recall of 73%, when tested over 9 languages. I am currently working in the Algorithms Lab, under the guidance of Prof. Steven Skiena, to improve the performance of the classifier.

Language detector for textual data   **Stony Brook University**
Implemented a novel algorithm, under the guidance of Yuri Puzis, to detect the language of a given piece of text using a trie based decision tree. The accuracy of the classification could be increased to an arbitrary level (limited by a dictionary) while training the decision tree.

Social network based on recommendation   **Self and friends**
Given things you like and don't, one can predict who is similar to you. We built this recommendation based social network on the Google AppEngine, using Django.

Differential AJAX Server   **Neorithm Technologies**
Wrote ASP.net modules to AJAX-ify legacy ASP.net applications, based on the 'diff' of the pages being transmitted to the client. Instead of serving full pages, the server would only hand out a diff of the new page with respect to the older page, and an injected javascript on the client would merge the changes.

Optimized MDX query generator   **Neorithm Technologies**

Given a high level declarative user query in XML, I developed a translator to transform the user query into an optimized MDX query for a Microsoft Analysis Services OLAP warehouse. This was part of an Anti-Money Laundering product, whose development I led.

Versioned file storage engine   **Neorithm Technologies**

I developed a datastore to store files, and exposed an API in C#. The datastore had versioning support, and supported multiple implementations for actual storage of files. In particular, a file-system based, and a relational database backends were built.

ATM switch   **Finacus Technologies**

Built a daemon to run on ATMs, and carry out transactions with banks using the Diebold and NCR protocols. The daemon was written using the Microsoft.Net framework and was extensible to support other protocols.

Web application development framework   **Finacus Technologies**

Built a web application development framework, consisting of UI elements (ASP.net controls), an ORM, workflows and code generators. These greatly reduced the development time and provided independence from 3rd party vendors.

Rater extensions   **Amdocs**

Developed various daemons and C++ extensions to support the telecom billing processes of Amdocs' *Rater* product, on Sun Sparc and AIX systems. I also traveled to Israel and Russia for testing and production support.

The Distributed DataBase   **Vidyavardhini College of Engineering**

Developed the parser, query execution engine and GUI for **T**he **D**istributed **DataB**ase (http://tddb.sf.net), a true distributed database built from the ground up, which conforms to the SQL-92 syntax.

Email Server   **Vidyavardhini College of Engineering**

Built an email server in JSP/servlets, where the communication between the server and client was done through web services.

Wordlist trainer   **Self**

Built a web application http://wl.sandesh247.com to help students prep for wordlists for exams like the GRE. It uses an AJAX interface which communicates with the backend using a REST-api, and has unique approach to learning - *revise that which you did not know the last time*, taking out the tedium to manually mark "hard" words.

Various jQuery plugins   **Self**

Built various jQuery plugins during the course of my employment in Neorithm Technologies, while improving usability in web applications. Some of them can be seen in online repositories linked at the end of this resume.

EXTRACURRICULAR ACTIVITIES

· Technical adviser and webmaster for the student's chapter of the Computer Society of India
· Won many programming contests in the Mumbai University campus during engineering studies
· Received accolades and cash bonuses while working in Amdocs DVCI
· Listen to Hans Zimmer, ColdPlay, Amanda Palmer; read P.G. Wodehouse, John Grisham; play cricket

LINKS

· Code samples: http://github.com/sandesh247; http://code.google.com/u/sandesh247
· Blog: http://sandesh247.com/journal