

## VISHNU VYAS SETHUMADHAVAN

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### **Academic Qualification :**

- Pursing *Masters of Science in Computer Science* at the University of Southern California, *Courses Taken:* Natural Language Processing, Database Systems, Artificial Intelligence.
- *B.E in Computer Science and Engineering*, SRM Engineering College, Anna University

### **Technical Skills :**

Programming Languages :	C, C++, C#, Java, Python, PHP, VB, Lisp
Operating Systems :	Windows 98/XP/2000, Linux
Web Technologies :	HTML, CSS, Javascript.
Servers :	Apache, Tomcat, IIS, CVS/SVN.
Platforms :	J2EE, .NET, LAMP
Databases :	MySQL, Oracle 8i, MS SQL Server.

### **Work Experience :**

- March 24<sup>th</sup> 2005 – December 10<sup>th</sup> 2005, Part time developer at CAIR, DRDO (Govt. of. India).  
***Responsibilities :***
  - Design and development of a framework for testing swarm algorithms in python.
  - Writing a XML compiler for converting fixed textual information into XML format (SVG) and deploying it in a web-application based environment.
- December 12<sup>th</sup> 2005 - February 12<sup>th</sup> 2006, developer at CAIR, DRDO (Govt. of. India).  
***Responsibilities :***
  - Part of a team involved in the design, development and testing of a swarm intelligence based algorithm for site selection in GIS (This work led to a paper on the same topic published in CEC 2006).

### **Undergraduate Research :**

- ***An Algorithm for Site Selection in GIS based on Swarm Intelligence*** – Ajay Sharma, Vishnu Vyas, Dipti Deodhare. IEEE Congress on Evolutionary Computation, 2006.
- ***Compression of Grayscale Images using Image Specific Encoding based on Unsupervised Hebbian Learning*** – Bharadwaj Srinivasan, Vishnu Vyas. Published as a student paper in the Proceedings of the International Conference on Human Machine Interfaces, 2004.
- ***Weighted Phonetic Matching*** – Vishnu Vyas. Presented at SRM Engineering College.

## Undergraduate Projects :

- ***The Cactus Virtual Machine – Final Year Project.***

**Website :** <http://cactusvm.sourceforge.net>

**Description :** A virtual machine for high level languages with support for dynamic typing and arbitrary precision arithmetic. Also provided is a compiler and a static linker for a subset of the scheme programming language.

**Responsibilities :**

- Design and Implementation of the virtual machine in C with support for dynamic typing.
- Design and Implementation of a loader with support for dynamic linking to preconfigured libraries in C.
- Design and Implementation of a static linker for resolving symbols at compile time in Python.

- ***MiniCrawler – Pre-final Year Project.***

**Description :** A simple web crawler for crawling linked set of hypertext documents either directly from the web or on a offline filesystem. A simple reverse index searching functionality is provided.

**Responsibilities :**

- Design and implementation of the web crawler module using python's urllib2 and SGMLParser.
- Design and implementation of a reverse indexing search module.

- ***BASIC Interpreter – Pre-final Year Project.***

**Description :** A simple interpreter for the subset of the BASIC programming language with support for simple looping statements, conditional statements, arithmetic expressions and variables.

**Responsibilities :**

- Design and implementation of the scanner and a recursive descent parser with stack based evaluation for arithmetic expressions in C.

## Honors and Awards:

- Awarded the ***Indian President's Award*** for Best Student Project (2006)
- Ranked first in the undergraduate class of 120 students in Artificial Intelligence, Computer Graphics and Probability and Queuing Theory.
- Ranked 98<sup>th</sup> in National Level Programming Competition conducted by IIT-Kh (2004)
- Ranked 2<sup>nd</sup> in AI-Bots, an Artificial Intelligence Programming Competition (2005)

## Other Projects:

- Developed a simple web forum using PHP and MySQL on the local intranet.
- Developed a web application to read ATOM 1.0 feeds using Lisp (CMUCL/TBNL/mod\_lisp).
- Developed software that could interface with text-based chess engines in Java.

## Other Interests:

Apart from academics, I maintain a well read blog at <http://vishnuvyas.wordpress.com/> and also I am an amateur photographer. Also, I am interested in teaching and social work and I've worked with under privileged children in helping them learn basic skills of reading and writing.