

Ashish Arun Bhangale

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Education

- Indiana University, Bloomington, Indiana
Masters, Computer Science
GPA: 3.67
Fall 2008 - 2010
- V. E. S.'s Institute of Technology (VESIT),
University of Mumbai, Mumbai, India
Bachelor of Engineering (BE) Major – Computer Engineering
Percentage: 67.78 %
GPA: 3.67 (approx)
July 2003 -
May 2007

Graduate Courses

Spring 2008: Distributed Systems, Specification and Verification, Computer Models of Symbolic Learning
Fall 2008: Advanced Operating Systems, Algorithms Design and Analysis, Elements of Artificial Intelligence

Professional Experience

- Microsoft Corporation, Redmond, WA (<http://www.microsoft.com>)
Intern Software Development Engineer in Test for Windows Live Test Team
May 2009 -
August 2009
- Indiana Daily Student, Bloomington, IN (<http://www.idsnews.com>)
Part time Web Developer and Programmer
August 2008 -
May 2009
Design, Develop and maintain website and publish tool in ASP.NET, C#, AJAX.NET,
JavaScript, SQL. Winner of ICPA award for Best Website
- MAQ Software Limited, Mumbai, India (<http://www.maqsoftware.com>)
Software Development Engineer
July 2007 -
June 2008
- Project
Microsoft Visual Studio Extensions 2008, Windows Live Development
Platform (Client: Microsoft Corporation)
January 2008 -
June 2008
- Responsibility
Worked as a team with Windows Live Development Platform Team at
Microsoft Corp. Worked on Feature Request, Enhancement, Verification,
Quality Improvement and Deployment of Windows Live Controls.
- Project
Crystal (Client: Swedish Medical Center)
November 2007 -
January, 2008
- Responsibility
Developed the web based application to manage hospital records.
- Project
HRMS (Human Resource Management System)
August, 2007 -
November, 2007
- Responsibility
Lead the team of 10 to successful completion of project. Designed and
developed the web based application.
- Designed commercial and free lance websites namely Millicent (www.millicent.in), Fin-Soft (www.fin-soft.com),
Taxation Career Care (www.taxschool.org), Praxis (praxis.vesit.org), SFMC (sfmc.vesit.org), IDS News (www.idsnews.com)

Skills Set

- Language
C, C++, C#, VC++, MATLAB 7.0, XAML, WIX Installer, Scheme
- Web Technology
HTML, PHP, ASP, ASP.NET, XML, JavaScript, AJAX, ASP.NET AJAX, JSON, Web Services,
SOAP
- Database
Microsoft SQL Server 2008, MySQL, Microsoft Access
- Tools
Microsoft Visual Studio 2008, Microsoft Visual Studio 6.0, Microsoft Visio, Microsoft Product
Studio, Microsoft Team Foundation Server, Source Depot, SVN, Octopus

Honors

- MCPD (Microsoft Certified Professional Developer Web Developer)
- MCTS (Microsoft Certified Technology Specialist in Web-Based applications)
- Teaching Assistant for the P515 Course, Specification and Verification by Dr. Steven Johnson
The course is on formal methods for Theorem Proving and Model Checking using formal logic. My task was to help
students with homework and projects, conduct weekly labs and grade homework assignments.
- Scored 90.93 % (18th in Merit) in the SSC examination and 92.17 % in the HSC examination

Academic Projects

- Synthesis paper on 'Scientific Workflows' under Dr. Beth Plale
The synthesis paper comprises of studying papers and writing taxonomy on scientific workflows in Kepler system. The study is to be further expanded to look at the distributed execution of scientific workflows in Kepler system in distributed environment. Spring, Summer 2009
- Specification and Verification of N-Queen Problem under Dr. Steven Johnson
The project consists of building models for a recursive, backtracking, constraint satisfaction algorithm and is checked for termination, correctness and completeness. The model is proved using theorems and lemmas. PVS and Scheme is used. Spring 2009
- Development of 'Document Tagging System' using machine learning techniques under Dr. D. Leake
comprising of a web service API as well as web application
The project consists of document parser, document classifier, vocabulary enhancer, learning module, etc as components. The different machine learning techniques used are Naïve Bayes, TFIDF and feature selection. Spring 2009
- Cloud Computing with Web Service for 'Auction Bidding System' under Dr. Beth Plale
Interoperable web service which uses Amazon S3 service for storage is developed and deployed in Amazon cloud. The web service is tested for performance and interoperability. The nature of distributed systems is studied by considering event ordering, consistency, architecture, etc. Spring 2009
- Development of OS161 educational operating system under the guidance of Dr. A Lumsdaine
Developed system calls, threads, processes, scheduler, synchronization, virtual memory, file system, etc for OS161 Fall 2008
- Multiplication of two arbitrarily large non-negative integers under the guidance of Dr. Paul Purdom
The main challenge in this project was to compare the implementation of a multiplication algorithm with that of GMP. The implementation was checked for performance and correctness. The algorithm is optimized using mathematical analysis. Fall 2008
- Implementation of Othello game and 8-puzzle solver using A* algorithm and case-based reasoning techniques under the guidance of Dr. D. Leake using functional programming Fall 2008

Undergraduate Project

- Project Mantis, IDE for Robotics Research Platform
The project comprised of a package to remotely control and program bots. The package consisted of an IDE and libraries. The robot was equipped with different types of sensors, INTEL processor and camera. The project was demonstrated with a learning robot which used camera and sensors for navigation
I was responsible for developing libraries (consisted mainly for Image Processing and Computations), programming the demo AI based robot to work with our software package, study of C++ Compiler (a Microsoft Research Project) and comparison with .NET compiler.

Other Significant Projects

- Prithvi II, an Industrial Research Platform - Prithvi II is a robot with image processing, voice command execution, obstacle detection, wireless control, pattern recognition and map-building capabilities. Received 3rd prize at an International Exhibition ELECRAMA 2006
- Robocon 2005, 2006 and 2007, an Asia-Pacific robotics contest - It includes making autonomous robots for a predefined pick and place task. Represented VESIT at Quarter finals in 2005, 2006 and Semifinals in 2007
- Dalal Street – Stock Exchange Simulation - Dalal Street Simulation is an application built using ASP and JavaScript for scripting. Also includes Dalal Street Monitor, built using Visual Basic, which simulates the stock market.
- CFS - Crypto Force Shield - Crypto Force Shield is software built using Visual Basic 6.0 which is used to store data in encrypted format in a virtual drive.
- TimeTab – Automatic Time Table Generator - Built using Visual Basic 6.0 to facilitate automatic generation of time table. The algorithm is complex as it is recursive and backtracking algorithm (Constraint Satisfaction) and considers about 20 parameters in designing time table. Also includes a feature to merge manual and automatic time table.
- Online GRE, CAT simulation examination test developed using PHP and MySQL
- VCE - Voice Command Executer - VCE built using Visual Basic 6.0 and SAPI. Voice commands are stored and can be executed using voice. This software was later used to develop a system for robots which takes voice commands.

- PlayJava using Java applets - PlayJava consists of six board games developed in Java, which can be played on LAN
- SNAP, a contest at IIT Bombay – Designed a robot that captures an overhead image of its track, processes shortest path and navigates using Image Processing. The image processing and navigation is synchronized.

Study Papers, Articles, Workshops, Seminars

- Conducted workshops on 'Specialized Server Controls in ASP.NET 2.0' and 'WPF and XAML in .NET 3.0' as a part of training program for the employees of MAQ
- Study Paper on 'Object Oriented Programming with JavaScript (JScript)', 'Internet Information Services 7.0', 'C# 3.0', 'Security in Ajax based Web Applications'
- Conducted workshop 'VisionTrix' on Image Processing at Indian Institute of Technology, IIT Roorkee for The Robotics Institute, India
- Conducted a 4-day workshop on MATLAB for SFMC, VESIT and a 6-day workshop on Advanced Visual Basic for Computer Society of India (CSI), VESIT. Also mentored the IEEE RoboSoccer workshop for IEEE, VESIT and the open software contest for CSI, VESIT

Extra Curricular Activities

- Won and participated various algorithm development and programming contest at national level
- Served as Organizer, Senior Web Editor and Chief Technical Officer for Students Forum of Mathematics and Computation (SFMC), VESIT in the year 2004-05, 2005-06 and 2006-07
- Event head of SupremaC, C/C++ programming contest and online programming contest at Praxis, VESIT in 2006
- Developed and organized Dalal Street for Praxis, VESIT in 2005, 2006 and 2007
- Class Representative in first year and second year of engineering at VESIT



.Net Framework 2.0
Web Applications



Web Developer