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Objective

To seek an exciting and challenging opportunity at Microsoft which would help me grow my skill set as an engineer.



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Timeline

[Feb '13 -]	Microsoft, Redmond, US SDE 2, AAPT - ARM
[Feb '12 – Feb '13]	Microsoft, Redmond, US SDE, AAPT - Workflow
[Fall '10 – Dec '11]	Donald Bren School of Information and Computer Sciences University of California Irvine, Irvine, CA, US MS in Computer Science
[June '10 – September '10]	Microsoft, Redmond, US SDE Intern, AAPT - AppFabric
[March '08 – August '10]	Adobe Systems India, Noida, India MTS
[July '07 – March '08]	OnMobile Global Ltd., Bangalore, India. Software Engineer
[2003 - 2007]	Indian Institute of Information Technology Allahabad B.Tech in I.T.

Areas of Interest

- | | |
|-------------------------|-----------------------------------|
| • Databases | • Data Structures |
| • Operating systems | • System Programming |
| • Information Retrieval | • O-Authorization |
| • Cloud Computing | • HA / DR for distributed service |

Significant Graduate Academic Courses Completed At UCI

- | | |
|---|--|
| • Principles of Database Management | • Transaction Processing & Database Mgmt |
| • Fundamentals of Algorithm | • Advances in Database Mgmt System |
| • Introduction to Artificial Intelligence | • Machine Learning |

Work Profile

Microsoft- Azure Resource Manager (AAPT)

Time Duration :: Nov '13 – Present

Place :: Microsoft, Redmond

Platform :: C#

As part of Azure Resource Manager team (AAPT), I worked on authorization feature. I was primary developer for integrating Role Based Access Control to Azure Resource Manager (ARM). Our team together with the AAD team, closely worked on developing RBAC for Azure. RBAC is based on PAS (Policy Authorization Service). The PAS service uses Storage Operations Service (SoS) to ensure HA / DR. I am also responsible for integrating marketplace purchases with ARM.

ARM is the upcoming service which is intended as replacement for RDFE. This service introduces deployment of cloud as templates and manages all Azure resources. The service acts as gateway for Azure.

As a result of my work with the team I was promoted to next level (level 62). Main development work for ARM has been done in C#.

Microsoft- Azure Portal (AAPT)

Time Duration :: Feb '13 – Nov '13

Place :: Microsoft, Redmond

Platform :: C#

As part of AUX team (AAPT), I first worked on autoscale feature. The team worked on automating different functionalities for Azure. Here, I independently worked on developing automated database backup, other than contributing significantly to the development of autoscale backend as well as frontend. As part of the team I was promoted to SDE 2 (level 61). I primarily worked on C#.

Microsoft – Workflow (AAPT)

Time Duration :: Feb '12 – Feb '13

Place :: Microsoft, Redmond

Platform :: C#/ T-SQL

As part of Workflow team (AAPT), I worked in Workflow Services and Workflow Hosting/Platform sub-teams. As SDE I got great opportunities to design, develop and provide support for number of features. A few technologies that I worked on and developed a good understanding of include REST API, T-SQL and Windows Azure. I also got good opportunity to develop my C# skills, .NET fundamentals,

debugging skills using tools like WinDBG and svcpfrf. I also developed Powershell cmdlets and worked on Powershell scripting.

My work required me to co-ordinate with teams across org. I worked closely with MDS team to enable their Microsoft specific solution for workflow. I also actively worked on servicing and worked on resolving issues in live deployments.

Microsoft – Summer Intern

Time Duration :: June '11 – Sep '11

Place :: Microsoft, Redmond

Platform :: C#

As a summer intern I worked in AppFabric team which was part of Azure Application Platform Team (AAPT). My internship was supervised by Amol Kulkarni (amolkulk). I worked on Gateway module. I was initially tasked with enabling CITs for the module using Pex & Moles from Microsoft research. This required me to go through Moles' documentations and figure out how they can be used. I also debugged certain issues and corrected them. These changes were absorbed in product code.

Later part of my internship involved making gateway tolerant to DoS attacks. To accomplish this I was required to go through lot of research material on DoS attacks. I successfully suggested solution, designed and implemented it. The solution which involved throttling was demonstrated to the team at the end of my internship.

Adobe Systems India

Time Duration :: March '08 – Aug '10

Place :: Adobe Ssystems India

Platform :: C++ /Javascript

My responsibility at Adobe India involved working on the development of Contribute and APPE. As a part of the product development team my responsibility lied with adding new features to products. I got an opportunity to independently add various features such as Anotation, Advanced Search, Embedding Web Kit to Contribute, the development of which involved working on C++ and Javascript. Later I got an opportunity to be part of the development team for Adobe PDF Print Engine, which involved system level programming.

OnMobile Global Ltd.

Time Duration :: July '07 - March '08

Place :: OnMobile Global, Bangalore

Platform :: C++

My responsibilities in the company involved programming of telephony cards. These are the cards which receive calls on the Time Division Multiplexed trunks. Work profile involves building new components on the existing in-house platform, which would interact directly with these cards. I worked with Audio Codes cards which were new to the company.

Projects

1.) qSpell - Microsoft Speller Challenge ::

Time Duration :: Jan '11 - June '11

Place :: ICS UC Irvine

Platform :: C++

Project was taken up as extra credit work in Winter & Spring quarters of 2011. Aim of the project was to develop a solution which would suggest correct spellings for web search queries. With this project we

took part in Microsoft Speller challenge 2011 sponsored by Microsoft Research. This was an open contest and teams across the globe participated in it. Our solution was based on Baye's theorem and used probability to rank plausible candidates. Probability was calculated using error model and language model. My work was concentrated in developing error model. Our team won 3rd prize in the contest. Project was developed under closed guidance of Prof. Li and team was led by Dr. Yasser Ganjisaffar.

2.) Full Text Search for Google Person Finder ::

Time Duration :: Sept '10 - Dec '10 **Place** :: *ICS UC Irvine* **Platform** :: Python

Project was taken up as extra credit work in fall quarter of 2010. Web application aimed at adding full text search to Google's person finder application. Person finder has been developed by Google to help relatives find their loved ones in times of natural calamity. The project was developed on python platform using Google App Engine SDK. Project was completed independently under the guidance of *Prof. Chen Li*. It won the third prize at *RHoK-2010*, Chicago.

3.) Semantic Query for Passage Retrieval ::

Time Duration :: Jan '07- June '07 **Place** :: Multimedia Lab at *NUS*, Singapore **Platform** :: C#

Project was taken up as the final semester project. It involved adding a new type of query – semantic query, to the popular open source search engine API – Lucene. The project was developed on C# platform and also involved the work in technologies such as ASP .NET and Windows Forms for the purpose of developing user interface. Project was completed independently as an academic intern at *School of Computing in National University of Singapore (NUS)* under *Dr. Chua Tat Seng*.

4.) Kluster – Web Categorization ::

Time Duration :: August - December '07 **Place** :: IIIT Allahabad **Platform** :: Java

Project involved categorization of the search results returned by popular search engine -yahoo. Various categories were generated on the fly using Latent Semantic Indexing (LSI). Project was developed on the java platform which involved the use of technologies such as Java Server Pages (JSP). Commercial products such as iBoogie were used for comparison. Project was successfully completed under the guidance of *Dr. S. Sanjal*

5.) 8051 CPU Scheduler ::

Time Duration :: January '06 - April '07 **Place** :: IIIT Allahabad **Platform** :: Assembly

Project was successfully completed as a 6th semester project assignment. It involved direct implementation of various scheduling algorithms on 8051 microprocessor. Various algorithms for CPU scheduling were compared, so as to end up on the most optimum one for the real time systems. Project was written entirely in 8051 assembly and involved writing IVT table for the processor. Project was done under the guidance of *Prof M. Radhakrishna*.

6.) Speech Recognition for Hindi numerals ::

Time Duration :: August - December '06

Place :: IIIT Allahabad

Platform :: C++

This problem was pursued as a semester project in 5th semester. The system read the speech signals from the recorded audio files in WAV format. Signal was quantized using MFC coefficients and was compared with the available database using GMM. Result was shown as Hindi text (Unicode characters). System was found to give a good accuracy of 75%. Project was successfully completed under the guidance of *Dr. U.S. Tiwary*.

7.) ASCII to UNICODE converter and auto generation of Hindi site :

Time Duration :: June - July '06

Place :: IIT Kanpur

Platform :: C++

This project was taken up as a summer project in *IIT Kanpur* under the guidance of *Dr. Rajat Moona*. It involved converting the ASCII coded Hindi glyph texts into Unicode characters. This converter was then used to convert ASCII coded Hindi e-books into Unicode text. Web pages were then dynamically generated for these books. Programs written in C were used for this purpose. The site was then displayed in UTF-8 character encoding. This allowed everyone to view the web page anywhere in the world without any need to download any specific fonts. Project was successfully completed.

Skill Set

Languages Known

C, C++, C#, Java, T-SQL, PHP, Powershell, HTML, assembly : 8086 (a86)/8051/8052 , SQL.

Platforms Worked On

Windows / Linux / DOS

Software/ Tools Experience

WinDBG, Gnu Debugger, Visual Studio, Eclipse, Matlab, LEX , YAAC, Microsoft Visio, Prolog and other general software

Natural Languages Known

English, Hindi, French

Awards & Achievements

- Worked in UCI team that took part in Microsoft Research Speller challenge 2011 and won 3rd prize.
- Worked on Person Finder project which won 3rd prize at RHoK event 2010, Chicago.

- Selected among top 1.3% of the 4,20,000 students appeared in AIEEE 2003.
- Among top 2.5% of the 2,00,000 students appeared in IIT-JEE 2003.
- Part of winning team of inter-school science quiz organized by National Science Center, New Delhi.
- Scored 90% marks in Mathematics Olympiad organized by Delhi Association of Mathematics Teachers.