

# Samarth S Prakash

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## Objective

To continuously expand my technical skill set, to develop innovative software and to contribute positively to the growth of the organization for which I work.

## Education

Year	Course	Institute	Grade
2007	M.Tech (IT)	International Institute of Information Technology, Bangalore	3.82 / 4
2005	B.E(Computer Science and Engineering)	R.N.S. Institute of Technology, Bangalore (Affiliated to Visveswariah Technological University).	84.50 %
2001	Standard XII (ISC)	Bishop Cotton Boys' School	87.25%
1999	Standard X (ICSE)	Bishop Cotton Boys' School	89.80%

## Achievement(s)

Awarded the **IIIT-B** [International (formerly Indian) Institute of Information Technology, Bangalore] **Gold Medal** for the **best academic performance** (2005-2007).

## Work Experience

### **Analyst at Outdu Media Tech, Bangalore** **Oct, 2007 – present**

Working on the development of a Digital Signage Network. A Digital Signage Network includes a group of centrally managed and addressable digital displays that display content to a targeted audience. The content can be modified and controlled remotely. The three major components of such a system are the player, distribution network and the front-end web application.

Work on the player includes operating system related work, systems management and also developing the player application. Distribution of media involves building the distribution network for efficient delivery of media.

**Technologies:** C#, C++

**Platform:** Windows, Linux

### **Research Intern at Microsoft Research India, Bangalore.** **Jan – July, 2007**

My work at Microsoft Research was on Location Search for Text queries, specifically address geocoding. Address geocoding is the process of assigning geographic identifiers (geographic coordinates expressed as latitude-longitude, geographic entities) to street addresses. The major problems faced in address geocoding: widely varying address formats (across countries and even regions), spelling errors in input address, incorrectly ordered or missing terms or extraneous terms in the input and many possible interpretations of erroneous input. Tolerance towards spelling errors is crucial when we consider providing support for multilingual address queries (a query which has combination of many languages in it).

My work included data extraction, converting data into required form, working on

	<p>various underlying algorithms and also coming up with metrics to evaluate the performance of the geocoder.</p> <p><b>Technologies:</b> C# <b>Platform:</b> Windows</p>
<p><b>Other Projects</b></p>	<p><b>DB Engine for Music Information Retrieval</b> <span style="float: right;"><i>May, 2006 – June, 2006</i></span></p> <p><b>Description:</b> Music Information retrieval means to extract information from a piece of music, which will help to compare it with other music pieces or to analyze it (pitch, scale, tempo, etc). Implemented a system (DBMS Engine), which stores (music) midi files and allows the user to find midi file(s) in the database, which sound(s) similar to a given midi. Each midi file is indexed and stored for searching. <b>Technologies:</b> C, Perl, Flex <b>Platform:</b> Linux</p> <p><b>Inverse Chess</b> <span style="float: right;"><i>Feb, 2006 – Oct, 2006</i></span></p> <p><b>Description:</b> <b>Inverse Chess</b> is a game of chess played backwards in time. Starting from a pre-defined position (simplest being two kings), players make moves inverse of chess and the player who sets up all his pieces in their normal chess positions wins the game. In inverse chess we spawn pieces as opposed to killing in chess, pawns move backwards and so on. The challenge in Inverse chess lies in the fact that there may result positions that were not possible in chess. This is a novel combinatorial game, and is being <b>patented under PCT worldwide</b>. <b>Technologies:</b> C++ / VB <b>Platform:</b> Windows</p> <p><b>GIS Routing</b> <span style="float: right;"><i>Sep 2006 - Nov 2006</i></span></p> <p><b>Description:</b> Software for routing (finding fastest / shortest path) between two nodes in a real road network. Constraints like <b>one ways</b> and <b>turn restrictions</b> also allowed. Modified djikstra's shortest path algorithm (to suit constraints). Tested on Bangalore City road network. <b>Technologies:</b> C++/C# <b>Platform:</b> Windows <b>Tools:</b> Sharp Map Library</p> <p><b>Simple Device Driver in Linux</b> <span style="float: right;"><i>Ocr, 2006</i></span></p> <p><b>Description:</b> Implemented a simple device driver for a simple character device. Included handling of interrupts with top and bottom halves. <b>Technologies:</b> C <b>Platform:</b> Linux</p>
<p><b>Software Skills</b></p>	<ul style="list-style-type: none"> <li>• <b>Languages:</b> C, C++, C#</li> <li>• <b>Databases:</b> MySQL, SQL Server</li> <li>• <b>Operating Systems:</b> Linux, Windows</li> </ul>
<p><b>Patents</b></p>	<p>Applied for a patent (pending) as co-inventor, from IITB, for '<b>Inverse Chess</b>' (software, hardware for both human and computer player for chess played backwards in time).</p> <p><b>Description:</b> <b>Inverse Chess</b> is a game of chess played backwards in time. Starting from a pre-defined position (simplest being two kings), players make moves inverse of chess</p>

	<p>and the player who sets up all his pieces in their normal chess positions wins the game. In inverse chess we spawn pieces as opposed to killing in chess, pawns move backwards and so on. The challenge in Inverse chess lies in the fact that there may result positions that were not possible in chess. This is a novel combinatorial game, and is being <b>patented under PCT worldwide</b>.</p> <p><b>Technologies:</b> C++ / C#  <b>Platform:</b> Windows</p>
<b>Papers</b>	<p><b>Robust Location Search for Text Queries</b></p> <p><b>Robust Location Search for Text Queries</b> (at Microsoft Research), presented at the <b>ACM GIS conference, 2007</b> and <b>International Conference for Data Engineering (ICDE), 2008</b></p> <p><a href="http://research.microsoft.com/research/adp/#publications">http://research.microsoft.com/research/adp/#publications</a>  <a href="http://www.cise.ufl.edu/dept/acmgis2007/accepted.html">http://www.cise.ufl.edu/dept/acmgis2007/accepted.html</a> (full paper #6)</p> <p><b>Accessibility – Enabling the Disabled</b></p> <p><b>Won Second Prize</b> (S.M.G Memorial Award) for the <b>paper</b> titled <b>Accessibility – Enabling the Disabled</b> at the <b>18<sup>th</sup> Computer Society of India</b> Karnataka Student Convention in November 2004.</p> <p>The paper deals with general techniques to make the web more accessible to the people who are disabled in some way. It gives detailed techniques to improve accessibility of web pages for people with visual impairments.</p>
<b>General Interests</b>	Writing, Chess, Tennis, Music.
<b>Personal Information</b>	<p><b>Full Name</b> Samarth S Prakash</p> <p><b>Date of Birth</b> November 29, 1983</p> <p><b>Gender</b> Male</p> <p><b>Languages</b> English, Kannada</p> <p><b>Permanent Address</b> 67/3A, 4<sup>th</sup> Cross, Lavelle Road, Bangalore, Karnataka.</p>
<b>References</b>	<p><b>Professor G.N.S Prasanna</b>  IIIT, Bangalore  <a href="mailto:gnsprasanna@iiitb.ac.in">gnsprasanna@iiitb.ac.in</a></p> <p><b>Joseph Joy</b>  Principal Software Architect  (former Co-head, Advanced Development and Prototyping Group)  Microsoft Research Lab, India.  <a href="mailto:josephj@windows.microsoft.com">josephj@windows.microsoft.com</a></p>