

# Vijay Rajakumar

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## Personal Profile

My interests are in building fast and scalable information retrieval systems. I am currently the lead engineer at Bimable, an UC Irvine based search-as-a-service startup. Previously, I was a graduate student in the Information Systems Group at UC Irvine. The most impressive thing that I have built so far is [www.omniplaces.com](http://www.omniplaces.com). Besides Google Local, it is the only location based instant typo tolerant search engine on 17M US business listings on the web!

## Education

**University of California -Irvine** Sep 2008 - May 2010  
MS in Computer Science GPA: 3.69/4.0  
Thesis: Interactive Query Suggestion.  
Adviser: Prof. Chen Li

**SSN College of Engineering, Anna University-India** May 2004 - July 2008  
Bachelor of Engineering(*Honors*) in Computer Science and Engineering 69%(no GPA system)

## Experience

**Bimable Technology Inc.** Software Engineer  
Irvine, CA, ([www.bimable.com](http://www.bimable.com)) May 2010 - Present  
Engineering lead at a three person tech startup started by UC Irvine Prof. Chen Li. Designed and built 4 iterations of a high performance instant search service product. Highlights are  
a. Built from ground-up an in-memory instant typo-tolerant search engine in C++.  
b. Optimized the engine for a mobile, location based application, leading to the first paying customer.  
c. Designed and implemented a method to perform high throughput real-time sub-second index updates right into the search serving platform.  
d. Extended the above into a search-as-a-service product. ([www.bimable.com/product](http://www.bimable.com/product)).

**Information Systems Group,UCI** Graduate Student  
Adviser: Prof.Chen Li, UCI Jul 2009 - May 2010  
*iPubmed* - Designed and built Fast Interactive Query Suggestion in search engines . Novel Trie based In-Memory Search Index structure serving search queries from a C++ http server. ([ipubmed.ics.uci.edu](http://ipubmed.ics.uci.edu))  
*Relevant courses* Database Management, Information Retrieval, Analysis of Algorithms, Machine Learning, Image Understanding, Multimedia Systems Design, Scientific Computing, Probabilistic Learning.

**Waran Research Foundation** Programmer, Part-Time  
Chennai, India, [www.warftindia.org](http://www.warftindia.org) Sep 2006 - July 2008  
Experience in Parallel Programming in C++ and Linux Cluster Administration.

## Technical Skills

*Languages:* C, C++ (STL,Boost), Python, Javascript (in order of expertise)  
*Tools:* UNIX, AWS, cmake, libevent, pthreads, gdb, kafka, hadoop  
I do not have any language or tool preference, although I learnt programming in C on UNIX. I am constantly looking for new hacks and I can pick up new ones rather quickly.

## Open Source Activities

*Google Person Finder* - Built instant search module for Google Person Finder project on the Google App Engine platform. Our team from UC Irvine collaborated with Google.org team and won the third-best-project prize in Random Hacks of Kindness (RhoK) in Chicago'10. ([code.google.com/p/googlepersonfinder](http://code.google.com/p/googlepersonfinder))  
*Apache Kafka* - Wrote C++ wrapper and bug fixes to python wrapper for Apache Kafka message queue. ([www.github.com/rvijax](http://www.github.com/rvijax))  
*Microsoft Imagine Cup 2006* - Built a text recognition system using mobile phone cameras to help the blind people read. Our undergrad team of 3 was selected as one of top 12 projects in India from over 30,000 submissions.