

# Kumaresh Visakan Murugan

## Home Address

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## University Address

Department of Computer Sciences and Statistics,  
1210 West Dayton Street, #1301 CS,  
University of Wisconsin-Madison,  
Madison, WI 53706  
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**Education**      Master of Science in Computer and Information Science,      *Expected May 2014*  
University of Wisconsin Madison

Bachelor of Engineering in Computer Science and Engineering,      *May 2010*  
College of Engineering Guindy, Anna University, Chennai, India  
CGPA 9.12/10

**Research Interests**      Data Mining, Information Retrieval, Data Analytics, Natural Language Processing,  
Database Systems

**Coursework**      Natural Language and Processing, Data Models and Language      *Graduate Courses*

Data Structures, Object Oriented Programming, Databases,      *Undergraduate Courses*  
Design and Analysis of Algorithms, System Software,  
Computer Networks, Computer Architecture

**Experience**      **Teaching Assistant**, Department of Computer Science and Statistics      *Sep 2012 - Present*  
University of Wisconsin Madison  
Introduction to Operating Systems

**Member of Technical Staff**, Veveo (India) Private Limited      *Jan 2011 - Jul 2012*

- *Conversation Based Information Retrieval System*  
Helped in the development of Entity Recognition Module and Knowledge graph Generation Module
- *Mining of Wikipedia*  
Mined the entire wikipedia web corpus and established implicit and explicit semantic relationships between mined entities using in-link, out-link and cyclic links between them
- *User Signature based on search actions*  
Helped in the construction of user profile from the user search logs and developed an analysis tool for demonstrating search enhancement procedures based on user activity in PDA devices.
- Helped in the development of Language Model based Keywords Extraction Module
- Developed Modules for merging of Smarttag Entities mined from various data sources as Wikipedia, IMDb, LastFM.

**Technical Skills**      Linux (Ubuntu, Debian), Windows      *Operating Systems*  
C, C++, Python      *Programming Languages*  
HTML, CSS, JavaScript, PHP, XML,      *Web Development*  
Apache Tomcat Web Server, AJAX, JSP  
MySQL, Oracle, SQLite3      *Database systems*  
Nirgam, OpenGL, LATEX      *Other tools*

<b>Projects</b>	<i>Dynamic Stress Wormhole Routing for Spidergon Architecture with Effective Fault Tolerance and Load Distribution</i>	
	Designed a new routing algorithm for Spidergon Network on Chip (NoC) with load balancing and fault tolerance and compared the performance with all existing architecture and routing algorithm	
	<i>3D Modeling of real time objects</i>	
	Simulated an ancient castle with special effect Rendering, Point Source Illumination, Animated Smoke Emission and 3D camera covering the entire arena using OpenGL.	
	<i>Protocol Independent Multicasting – Sparse model (RFC 4601)</i>	
	Implemented a multicast routing protocol that uses the underlying unicast routing information base and builds unidirectional shared trees rooted at a rendezvous point per group.	
<i>Job site management system</i>		
Includes profile management of users under different categories, recommendations based on user activities and category and development of a forum and messenger for the users.		
<i>Single Window Admission System</i>		
Developed an application that allows concurrent access to the admission system. The GUI was developed using the graphics functionality in C.		
<i>Hot Spots based traffic monitoring system</i>		
Simulated a self-controlled traffic monitoring system which controls traffic based on traffic density around the hot spots using 8051 microcontrollers.		
<b>Leadership Activities</b>	<b>President of the Students Association and Arts Society,</b> College of Enginnering Guindy	2009 – 2010
	<b>Core Cordinator,</b> Techofes (National Cultural Fest of College of Enginnering Guindy)	2008
<b>Other Achievements</b>	Winner of Marketing Guru, a marketing oriented management event in Kurukshetra (National Tech Fest of College of Engineering Guindy)	2009
	Placed in top 0.1% in TNPCEE (Tamil Nadu Professional Courses Entrance Examination) among approximately 200,000 candidates	2006
	One of the 100 students selected for Young Scientist Adoption Program conducted by Noorul Islam Engineering College, India	2002 – 2003
	National Level 15 <sup>th</sup> rank in Holy Faith Science Talent Search Exam	2001