

Karthikeyan Vasuki Balasubramaniam

[Research Gate](#)

CONTACT INFORMATION

Member Technical Staff - SW
Data Protection Engineering Group
NetApp Inc.
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RESEARCH INTERESTS

Distributed Systems, Parallel Computing, Data Mining

EDUCATION

Bachelor of Engineering in Computer Science & Engineering

July 2009 – May 2013

PSG College of Technology, Coimbatore

Cumulative Grade Point Average: 9.57/10, Rank : (1/119)

Junior/Senior GPA : 3.87/4.0

Relevant Coursework : Distributed Computing Systems, Distributed Component Architecture, Data Mining, Operating Systems, Advanced Data Structures & Algorithms, Genetic Algorithms

Diploma in .NET Technologies

Jun 2010 – Sept 2011

NIIT Computer Education & Training

Performance: Good (70-79%)

RESEARCH PUBLICATIONS

Karthikeyan V.B, Dr. G. Sudha Sadhasivam, Ms. K. Sathiya Priya (2012). *A New Method for Preserving Privacy in Quantitative Association Rules using Genetic Algorithms*. International Journal of Computer Applications (0975 – 0887) Volume 60 No.12, December 2012. [Link to Publication](#)

WORK EXPERIENCE

Member Technical Staff – Software Developer, NetApp Inc.

Jun 2013 - Present

Improving TestCenter Framework Infrastructure

Jun 2013 – Sept 2014

- Included test scripts to detect race conditions, thread deadlocks, thread synchronizations issues, kernel and user space memory leaks, distributed transaction errors, cluster infrastructure issues.
- My tests were able to figure out **13 critical OS bugs** in the areas of Replication and backup. Received **Spot Award** from **Vice President** for my contribution.

Enhancing 7-Mode Volume SnapMirror of Data ONTAP Operating System

Jun 2013 – Jan 2014

- Fixed OS disruption bugs and file system corruptions in Data Replication Module.

High Performance & Scalability of SnapMirror in High-End platforms

March 2014 - Present

- Root caused and fixed severe performance dip of ~25-30% of data replication throughput, both for physical replication and logical replication.
- Key responsibilities include detection and fixing key System (CPU/Disk/Memory) and Network bottlenecks
- The performance regression was recovered and further **boosted by 5%**.

Development and Enhancing of Transition Data Protection – SnapMirror

- Critical tool for customers to transition between two distributed storage systems of NetApp
- Provided Enhancements for key customers to perform customized transition

RESEARCH INTERNSHIP

TestCenter Framework for Developer style WhiteBox and Systemic testing for SnapMirror

NetApp Inc., Bangalore, India

Jan 2013 - May 2013

- Work includes design, architecture and implementation of the framework for two of the sub-products of Data Replication Module of Data ONTAP Operating System - SnapMirror
- This framework is extensively used by **200+ developers of the Data Protection Group** and is now **adopted by other technical groups of NetApp**. Several **critical OS disruption bugs** were covered by this work.

COMPUTER SCIENCE ENGINEERING PROJECTS	Reporting Incidents by Parallel Log Analysis using Hadoop (Prof. Dr. G. Sudha Sadasivam & Asst. Prof.(Sr. Gr) Ms. Vijayalakshmi) Design and implementation of Map-Reduce model to analyze web server log files and report incidents using the capabilities of Hadoop framework. Improved the speed of file analysis by 10x and created a new data type in MapReduce to pass information from Map to Reduce.	July, 2011 – Nov, 2011
	Privacy Preserving Rule Mining using Genetic Algorithms (Prof. Dr. G. Sudha Sadasivam & Asst. Prof.(Sr. Gr) Ms. K. Sathiya Priya) Proposed a Genetic Algorithm model to hide fuzzy association rules	Dec, 2011 – May, 2012
	Fingerprint Matching using Genetic Algorithms (Asst. Prof.(Sr. Gr) Ms. Vijayalakshmi) Matching of two fingerprint images using genetic algorithm based model. Implemented in MATLAB using Optim Toolbox and Image Processing Toolbox. Results indicate reduced false acceptance and reduced false rejection rate.	July, 2013 – Nov, 2013
MOBILE APPS	GPS Based Alert System using Location Based Services in Android (Asst. Prof.(Sr. Gr) Ms. Vijayalakshmi) An android application to alert users of accident prone areas, dangerous curves, bends while travelling. The notification can be received via Message/Voice before 500m.	July, 2011 – Nov, 2011
	Cryptography App in Windows 8 Windows 8 AppFest, Bangalore	September 2013
APPLICATION PROJECTS	Online Gas Booking System	
	Online Voting System – Cordys Mashup contest Developed and deployed online public voting system in Cordys Cloud platform	
	Event Management System System to manage Events such as technical symposiums, tech fests, inter-college coontests	
TECHNICAL SKILLS	Softwares, Platforms and Domains IntelliJ, Android Studio, Eclipse, NetBeans IDE, Matlab, Unix/Linux Kernel Development, Google Maps API, Hadoop/HDFS, MapReduce, Android App Development, Windows 8 App Development	
	Programming Languages(Rating out of 10, Min-1 Max-10) C(8), C++(7), Java(7.5), Perl(8), Python(6), C#(7.5), C#.NET(7.5), SQL(8), SMF(NetApp Internal - 7)	
HONOURS AND AWARDS	School Topper – Class X : 95.1%	
	Gold Medalist – Topper of Department of CSE : CGPA : 9.57/10 – 1st Rank out of 119 students	
	Cognizant Certified Student – IT Foundation Skills : 95 percentile	
	Guinness Record – Microsoft Windows 8 AppFest : Developed Cryptography App for Windows 8	
	Bhavishya Jyothi Scholarship Test (Aptitude and Software skills) : Slab A	
	ACM ICPC Asia Regionals Programming Contest : 92nd rank Asia wide	
	Spot Award from Vice President of NetApp Inc. : Contribution to TestCenter Framework	
	MacMillan Maths Contest – University of New South Wales : 67 percentile	
POSITION OF RESPONSIBILITY	EMATZ – All India General Knowledge Test : 90 percentile	
	Secretary, Indian Society for Technical Education – Students Chapter Organizing paper presentations, workshops, techtalks	Jun, 2012 - May, 2013
	Member & Event co-ordinator, CSE Association Organized coding contests, guest lectures and technical workshops on behalf of CSEA	Jun, 2011-Dec, 2012
	Member, Association of Computing Machinery(ACM) Active member of ACM.	Dec 2011 – Present
	Member, Indian Linux User Group(ILUG) Setting up Distributed Computing Laboratories	Jun 2010 – Present

OTHER INTERESTS

Leading (Managed the assignments and seminars of 6-member group)

Teaching (Practical Session of Cloud Computing Course for Polytechnic students, assisted juniors in campus interviews, guided my fellow-mates in debugging project issues, mentoring New College Graduates in my team at NetApp)

Active Research in Archaeology (Exploring the science of sculptures and monuments)

Stamp and coins collection (Coins of Arabian, Asian and American countries and stamps of American countries)

Organizing (Part of the organizing team of Kruzade-National level technical symposium, Organized guest lectures and workshops in Distributed Computing, Coding contests for fellow-mates and juniors, Organizer of Alumni Meet of CSE Department)

Contributing (Member of HelpAge India – helping old people)