

Shakthi Kannan

PERSONAL INFORMATION

Current location: Chennai, India
Mobile: (91) 98401-39007
Date of Birth: 10 November 1980
GitLab: gitlab.com/shakthimaan
Gallery: gallery.shakthimaan.com

E-mail: author@shakthimaan.com
Nationality: Indian
WWW: www.shakthimaan.com
Blog: shakthimaan.com/news.html
IRC: "mbuf"

RESEARCH AREAS Programming languages, Compilers, Systems.

ACADEMIC HISTORY

Rochester Institute of Technology, Rochester, New York, US
M.S., Information Technology, August 2002 - May 2004

- CGPA: 3.85/4.00

St. Joseph's College of Engineering, Chennai, Tamil Nadu, India
B.Tech., Information Technology, June 1998 - July 2002

- University Rank #3
- Aggregate: 88%

EMPLOYMENT RECORD

Tarides, Chennai, India
Senior Software Engineer 2020 - present

- Team Lead for Benchmark Tooling team.
- Performance analysis for Multicore OCaml compiler.

Aerospike, Bengaluru, India
Senior DevOps Engineer 2016 - 2019

- Training and consulting customers on application development, operations, data modeling, sizing and capacity planning, SSD certification, disaster recovery, backup management and NoSQL databases.
- Production support, troubleshooting and debugging for on-premises and cloud deployments.

VIMANA, Chennai, India
Senior Engineer (R&D) 2014 - 2016

- Adapter development for PLCs and device configuration management.
- Web application development for analysis of manufacturing systems.
- Deployment, configuration and maintenance of infrastructure.

Red Hat, Pune, India
Principal Software Engineer 2011 - 2014

- Tools for detection of Linux kernel Application Binary Interface (ABI) breakage, and user-space ABI assurance.
- Static analysis of Linux kernel, and device driver code.

Qvantel, Hyderabad, India
Senior Engineer 2007 - 2011

- Tools for mediation, and telecommunication systems.
- USB device driver customization for mobile platforms.

Aricent, Chennai, India
Senior Software Engineer

2006 - 2007

- Network security product tool development.
- Linux USB device driver development.

Hexaware Technologies, Chennai, India
Software Engineer

2004 - 2006

- USB host, gadget device driver development for custom hardware for Linux kernels.
- PCI Linux device driver development for in-house hardware.

PATENTS

- Multidimensional, multi-configuration compiler phase output visualization technique. August 13, 2015.
- Automated framework for tracking and maintaining kernel symbol list types. May 18, 2013.
- Migration assistance using compiler metadata. February 19, 2013.
- System and method for tracking software package dependencies using a graph model. May 30, 2012.
- Hardware implementation of interpreted programming language stacks. February 23, 2012.

PUBLICATIONS (MAGAZINE)

- Kannan, S. (2019, March-2020, April). Emacs Lisp (series). *Open Source For You*.
- Kannan, S. (2017, March-2019, April). DevOps (series). *Open Source For You*.
- Kannan, S. (2015, July-2016, June). Introduction to GNU Emacs (series). *Open Source For You*.
- Kannan, S. (2015, July). Verilator. *Electronics For You*.
- Kannan, S. (2015, June). Kansas Lava. *Electronics For You*.
- Kannan, S. (2014, June - 2015, June). Introduction to Haskell (series). *Open Source For You*.
- Kannan, S. (2014, June). HDL Complexity Tool. *Electronics For You*.
- Kannan, S. (2014, May). GNU Unified Parallel C. *Open Source For You*.
- Kannan, S. (2014, January). Drawtiming. *Electronics For You*.
- Kannan, S. (2013, October). GNU Parallel. *Open Source For You*.
- Kannan, S. (2013, October). Sparse. *Open Source For You*.
- Kannan, S. (2013, September). A peek into the CUnit testing framework. *Open Source For You*.
- Kannan, S. (2013, August). Getting started with Haskell on Emacs. *Open Source For You*.
- Kannan, S. (2013, March). Eqntott: Truth table generator from Boolean equations. *Electronics For You*.

PUBLICATIONS (BOOK)

- Kannan, S. (June 2014). "i want 2 do project. tell me wat 2 do." ¹ An introductory book for students and professionals on working with Free/Libre and Open Source Software projects.

SKILLS

- Languages: C, C++, Java, JavaScript, OCaml, Haskell, assembly (Intel, ARM).
- Scripting languages: Bash, Perl, Python, Ruby, Erlang, Elixir, Lua, Emacs Lisp.
- Tools: Lex, Yacc, L^AT_EX, CVS, Subversion, Git.
- Application: LibreOffice Suite, Gimp, Inkscape, GNU Emacs.
- Distributions: Fedora, Red Hat, Ubuntu, Debian, Gentoo, Slackware, SuSE, FreeBSD.
- Databases: MySQL, PostgreSQL, MongoDB, Redis, Aerospike.
- Infrastructure: Docker, Mesos, Marathon, Chronos, Consul, MQTT, Kubernetes.
- Automation: Ansible, Chef, Puppet, Salt, CFEngine, Jenkins.
- Operating Systems: GNU/Linux, *nix, Macintosh.
- Natural Languages: English, Tamil, Hindi.

¹<http://www.shakthimaan.com/what-to-do.html>

COMMUNITY
EXPERIENCE

GNU Emacs

Contributor

2015 - present

Fedora

Developer, Fedora Electronic Lab ²
Haskell Package Maintainer ³
Ambassador ^{4 5}

2009 - 2014

Indian Linux User's Group - Chennai

Volunteer

2004 - present

LinuxForum.com

Moderator

2003 - 2008

AWARDS

- RIT Graduate Scholarship (2002-2004).
- University Rank #3, Bachelor's in Information Technology, St. Joseph's College of Engineering.
- "Best Student in Information Technology" (1998-2002), St. Joseph's College of Engineering.

PRESENTATIONS

- Kannan, S. (2019, August 9-11). "XeTeX Book Template". TeX User Group Conference 2019. Sheraton Palo Alto Hotel, Palo Alto, California, United States of America.
- Kannan, S. (2019, July 13). "di-git-ally managing love letters". R. V. College of Engineering, Bengaluru, Karnataka, India.
- Kannan, S. (2019, June 21-22). "Shooting the trouble down to the Wireshark Lua plugin" workshop. Rootconf 2019, NIMHANS Convention Centre, Bengaluru, Karnataka, India.
- Kannan, S. (2019, May 1-2). "Aerospike Automation". Aerospike User Summit 2019, San Francisco, California, United States of America.
- Kannan, S. (2019, March 2). "Opportunities in Free/Libre and Open Source Software." Computer Society of India, Madras Chapter, Chennai, India.
- Kannan, S. (2018, May 5). Elixir scripting workshop. MVJ College of Engineering, Whitefield, Bengaluru, Karnataka, India.
- Kannan, S. (2017, October 13-14). "Nursery Rhymes" and "Icoboard". Science Hack Day India 2017. Sankalp Bhumi resort, Belgaum, Karnataka, India.
- Kannan, S. (2017, May 11-12). "Nursery Rhymes". Rootconf 2017, MLR Convention Centre, JP Nagar, Bengaluru, Karnataka, India.
- Kannan, S. (2017, February 16-17). "Nursery Rhymes" and "Yet Another Lightning Talk - Season Two". PyCon Pune 2017, Pune, Maharashtra, India.
- Kannan, S. (2016, November 3). "A World of Emacs". Chennai Geek Night 36th edition, Chennai, Tamil Nadu, India.
- Kannan, S. (2016, May 13). "Literate DevOps using GNU Emacs". Pune Emacs Users' Group, Pune, Maharashtra, India.
- Kannan, S. (2016, April 23). "Ansible mode in Emacs". Chennaiipy meet, Chennai, India.
- Kannan, S. (2016, April 20). "Literate DevOps using GNU Emacs". Chennai DevOps for Continuous Delivery and Beyond, Chennai, Tamil Nadu, India.
- Kannan, S. (2015, October 2-4). "Pretty Printing in Python", "Nursery Rhymes", and "Yet Another Lightning Talk". PyCon India 2015, NIMHANS Convention Center, Bengaluru, India.
- Kannan, S. (2015, September 26). G-code Visualization Tools. Chennaiipy meet. The Institute of Mathematical Sciences, Chennai, Tamil Nadu, India.

²https://fedoraproject.org/wiki/Electronic_Lab

³https://fedoraproject.org/wiki/Haskell_SIG?rd=SIGs/Haskell#SIG_Members

⁴<http://www.shakthimaan.com/work.html>

⁵<http://www.shakthimaan.com/downloads.html>

- Kannan, S. (2015, August 22). Paho Python client for MQTT. Chennai meet. The Institute of Mathematical Sciences, Chennai, Tamil Nadu, India.
- Kannan, S. (2013, June 14). Fedora workshop. St. Joseph's College of Engineering, Chennai, Tamil Nadu, India.
- Kannan, S. (2013, April 20). Fedora workshop. Sri Jayachamarajendra College of Engineering, Mysore, Karnataka, India.
- Kannan, S. (2013, March 2). Fedora OpenStack workshop. P.E.S. College of Engineering, Nagsen Vana, Aurangabad, Maharashtra, India.
- Kannan, S. (2013, February 22). "Emacs + Magit = Git Magic". Pune Emacs Users' Group, Pune, Maharashtra, India.
- Kannan, S. (2013, February 15-17). Introduction to GCC Workshop. GNUunify 2013. Symbiosis Institute of Computer Studies and Research, Pune, Maharashtra, India.
- Kannan, S. (2013, February 2-3). Fedora workshop. Sandip Institute of Technology and Research Center, Nashik, Maharashtra, India.
- Kannan, S. (2012, December 1). OpenStack workshop. Symbiosis Institute of Computer Studies and Research, Pune, Maharashtra, India.
- Kumar, P., Rose, C., & Kannan, S. (2012, October 7). Fedora Activity Day workshop. R. V. College of Engineering, Bengaluru, Karnataka, India.
- Kannan, S. (2012, June 30). Fedora workshop. Indira College of Commerce and Science, Pune, Maharashtra, India.
- Kannan, S. (2012, June 17). "Quite Universal Circuit Simulator - A Qt Love Story". Barcamp Mumbai 9. Veermata Jijabai Technological Institute, Mumbai, Maharashtra, India.
- Kannan, S. (2012, March 28-29). Publican. Document Freedom Workshop 2012. Indian Statistical Institute, Kolkata, West Bengal, India.
- Kannan, S. (2012, March 24-25). "nursery_rhymes.rb". RubyConf India 2012. Hyatt Regency, Pune, Maharashtra, India.
- Kannan, S. (2012, February 26). "i-want-do-project, tell-me-wat-2-do-fedora". Pragyana 2012. National Institute of Technology, Tiruchirappalli, Tamil Nadu, India.
- Kannan, S. (2011, December 27). Introduction to Fedora, Tux workshop. MindSpark 2011. College of Engineering, Pune, Maharashtra, India.
- Kannan, S. (2011, December 4). Introduction to Fedora workshop. Foresight Institute of Management and Research, Pune, Maharashtra, India.
- Kannan, S. (2011, November 4-6). FUDCon Pune 2011: "Quite Universal Circuit Simulator - A Qt Love Story". College of Engineering, Pune, Maharashtra, India.
- Kannan, S. (2011, October 8). Fedora Activity Day II 2011: "i-want-2-do-project, tell-me-wat-2-do", and "di-git-ally managing love letters". College of Engineering, Pune, Maharashtra, India.
- Kannan, S. (2011, September 28-October 2). Shaastra 2011: "i-want-2-do-project, tell-me-wat-2-do". Indian Institute of Technology, Madras, Chennai, Tamil Nadu, India.
- Kannan, S. (2011, September 24). Fedora Activity Day I 2011: "di-git-ally managing love letters". Red Hat, Pune, Maharashtra, India.
- Kannan, S. (2011, September 16-18). PyCon India 2011: From Python to Silicon. Symbiosis, Pune, Maharashtra, India.
- Kannan, S. (2011, August 26-27). GNU Make: "Dum Ka Biryani, Make for each other". Federal Institute of Science and Technology, Angamaly, Kerala, India.
- Kannan, S. (2011, August 20). Introduction to Test Driven Development using Ruby, Rails, Cucumber. Pune Institute of Computer Technology, Pune, Maharashtra, India.
- Kannan, S. (2011, August 6). Introduction to Python. Maharashtra Institute of Technology, College of Engineering, Pune, Maharashtra, India.
- Kannan, S. (2011, February 19). Free/Open Source Hardware, What it means to Design Engineers. Electronics For You Expo 2011. Pragati Maidan, New Delhi, India.
- Kannan, S. (2011, February 11-12). "Dum Ka Biryani, Make for each other". GNUunify 2011. Symbiosis Institute of Computer Studies and Research, Pune, Maharashtra, India.
- Kannan, S. (2010, October 2). Fedora, Free Software workshop (IRC). Mepco Schlenk Engineering College, Sivakasi, Tamil Nadu, India.

- Kannan, S. (2010, September 19-20). Building a FOSS Ecosystem in India; the role of different players panel discussion. OSI Tech Days. Chennai Trade Center, Chennai, Tamil Nadu, India.
- Kannan, S. (2009, December 26). Fedora, Free Software workshop. Maharaja Sayajirao University of Baroda (Vadodara), Gujarat, India.
- Kannan, S. (2009, August 22). Fedora workshop. ACE College of Engineering, Ankushapur, Ghatkesar Mandal, Ranga Reddy District, Andhra Pradesh, India.
- Kannan, S. (2009, July 18-19). GNUtsav. National Institute of Technology, Agartala, Tripura, India.
- Kannan, S. (2009, May 16-17). FOSSJAM. Jaipur Engineering College and Research Centre, Jaipur, Rajasthan, India.
- Kannan, S. (2009, May 2). Introductory Free Software workshop. NBKR Institute of Science and Technology, Vidyanagar, Nellore district, Andhra Pradesh, India.
- Kannan, S. (2009, March 21). “Badam Halwa of Embedded Systems”, gEDA and Fedora Electronic Lab. Government Engineering College, Barton Hill, Thiruvananthapuram, Kerala, India.
- Kannan, S. (2009, February 28). Badam Halwa of Embedded Systems. FOSSConf 2009. Thiagarajar College of Engineering, Madurai, Tamil nadu, India.
- Kannan, S. (2009, February 14). “i-want-2-do-project, tell-me-wat-2-do”. GNUunify 2009. Symbiosis Institute of Computer Studies and Research (SICS), Pune, Maharashtra, India.
- Kannan, S. (2008, October 18). “Emacs a day keeps the vi-zing away”. Department of Astronomy, Osmania University, Hyderabad, Andhra Pradesh, India.
- Kannan, S (Volunteer). (2008, September 20). Software Freedom Day. GNU/Linux installation. Primora, Hyderabad, Andhra Pradesh, India.
- Avvari, S., & Kannan, S. (2008, August 1-2). “Inky Pink Poky”, and “Openmoko - Free Your Phone”. Mukt.in 2008. Osmania University, Hyderabad, Andhra Pradesh, India.
- Kannan, S. (2008, May 16). Debian GNU/Linux installation. Satyam Learning Centre Insitute of Science and Technology, Piglipur village, Hayath Nagar, Andhra Pradesh, India.
- Kannan, S. (2007, December 15). FOSS VLSI tools at VLSI-Trends and Applications. Osmania University, Hyderabad, Andhra Pradesh, India.
- Ranganathan, A., & Kannan, S. (2007, November 17). Embedded/VLSI FOSS workshop. BMS College of Engineering, Bengalooru (Bangalore), Karnataka, India.
- Kannan, S. (2007, October 28). Introduction to OpenMoko. TwinCling Society, Osmania University, Hyderabad, Andhra Pradesh, India.
- Kannan, S. (2007, October 27). Free Software workshop. University of Hyderabad, Gachibowli, Hyderabad, Andhra Pradesh, India.
- Kannan, S. (2007, March 24). GNU Embedded/VLSI workshop. Jaya Engineering College, Thiruninravur, Tamil Nadu, India.
- Kannan, S. (2007, March 10). Free/Libre/Open Source workshop. Osmania University, Hyderabad, Andhra Pradesh, India.
- Kannan, S. (2007, March 3). Careers with GNU/Linux, and Alliance VLSI CAD Tools. Free/Open Source Software at National Institute of Technology, Calicut, Kerala, India.
- Kannan, S. (2007, January 20). Shakthimaan! The Indian Challenge of FLOSS Advocacy. Indian Institute of Technology, Madras, Tamil Nadu, India.
- Chakravarthy, D. & Kannan, S. (2006, September 9). Bioinformatics-FLOSS workshop. Bioinformatics department. Karpagam Arts and Science College, Coimbatore, Tamil Nadu, India.
- Ranganathan, A., & Kannan, S. (2006, September 2). GNU Embedded/VLSI Workshop. SSN College of Engineering, Kalavakkam, Tamil Nadu, India.
- Kannan, S. (Volunteer). (2006, August 19-20). FLOSSAGE 2006. Jaya Engineering College, Thiruninravur, Tamil Nadu, India.
- Kannan, S. (Volunteer). (2006, August 13). FLOSS training. Jaya Engineering College, Thiruninravur, Tamil Nadu, India.
- Kannan, S. (2006, August 5). Careers with GNU/Linux, Free Software, GNU/Linux desktop, and localization in GNU/Linux. Introduction to FLOSS workshop. Karpagam Arts and Science College, Coimbatore, Tamil Nadu, India.
- Kannan, S. (2006, July 31). Careers with GNU/Linux, GNU/Linux desktop. Introduction to

FLOSS workshop. MNM Jain Engineering College, Thorappakkam, Tamil Nadu, India.

- Kannan, S. (2006, July 22). Careers with GNU/Linux, Free Software for engineers, GNU/Linux desktop. Introduction to FLOSS workshop. Jaya Engineering College, Thiruninravur, Tamil Nadu, India.
- Kannan, S. (2006, July 1). Tamil with Ubuntu. Indian Institute of Technology, Madras, Tamil Nadu, India.
- Kannan, S. (2006, April 22). Introduction to Quilt. Indian Institute of Technology, Madras, Tamil Nadu, India.
- Kannan, S. (2006, April 8). USB and GNU/Linux - An Overview. Indian Institute of Technology, Madras, Tamil Nadu, India.
- Kannan, S (Volunteer). (2006, March 25-26). FLOSS Exhibit 2006. Careers with GNU/Linux. Arunai Engineering College, Thiruvannamalai, Tamil Nadu, India.
- Kannan, S (Volunteer). (2006, March 18). Introduction to FLOSS, Workshop. Careers with GNU/Linux. SSN College of Engineering, Old Mahabalipuram Road, SSN Nagar, Tamil Nadu, India.
- Kannan, S. (2006, March 11). Free Software and GNU/Linux. Federal Institute of Science and Technology, Angalamy, Kochi, Kerala, India.
- Kannan, S. (2006, March 4). Embedded GNU/Linux Labs HOWTO, and Alliance VLSI CAD Tools with GNU/Linux. GNU Embedded/VLSI Workshop. Kongu Engineering College, Perundurai, Erode, Tamil Nadu, India.
- Ranganathan, A., Subramanian, B., & Kannan, S. (2006, February 25). GNU Embedded/VLSI Workshop, in association with Electrical Engineering Association, Indian Institute of Technology, Madras. Alliance VLSI CAD Tools HOWTO and Embedded GNU/Linux Labs HOWTO. Indian Institute of Technology, Madras, India.
- Ranganathan, A., Subramanian, B., Ramanraj, & Kannan, S. (2005, November 12-13). Tuxedo 2005. Careers with GNU/Linux, and Free Software for Engineers. Sri Jayachamarajendra College of Engineering, Mysore, Karnataka, India.
- Kannan, S. (2005, October 22). Alliance VLSI CAD Tools with GNU/Linux and Embedded GNU/Linux Labs HOWTO. Crescent Engineering College, Chennai, Tamil Nadu, India.
- Kannan, S (Volunteer). (2005, October 16). GNU/Linux workshop for NGOs. ILUGC in association with CIOSA. Ma Foi Academy, Chennai.
- Kannan, S. (2005, September 24). Careers with GNU/Linux, and Free Software for engineers. Adhiparasakthi Engineering College, Melmaruvathur, Tamil Nadu, India.
- Kannan, S. (2005, September 10). Careers with GNU/Linux, GNU/Linux desktop, and Free Software for engineers. Stella Maris College, Chennai, Tamil Nadu, India.
- Kannan, S. (2005, September 3). Careers with GNU/Linux. Saveetha Engineering College, Chennai, Tamil Nadu, India.
- Kannan, S. (2005, August 20). Careers with GNU/Linux, and Free Software for Engineers. GNU/Linux workshop. Thiagarajar College of Engineering, Madurai, Tamil Nadu, India.
- Kannan, S. (2005, August 9). Careers with GNU/Linux. Hindustan College of Engineering, Padur, Tamil Nadu, India.
- Chandrasekhar (AU-KBC, MIT), Murali (AU-KBC, MIT), Venkatesh (AU-KBC, MIT), & Kannan, S. (August 6, 2005). AU-KBC FLOSS Road Show. Bannari Amman Institute of Technology, Sathyamangalam, Tamil Nadu, India.
- Kannan, S. (2005, July 23). Careers with GNU/Linux, and Free Software for Engineers. MCA Department, Alagappa University, Karaikudi, Tamil Nadu, India.
- Kannan, S. (2005, July 16). Careers with GNU/Linux, Free Software for Engineers, and GNU/Linux Desktop. GNU/Linux workshop. CSE Department, Saranathan College of Engineering, Tiruchirapalli, Tamil Nadu, India in association with Tiruchirapalli MYSQL group.
- Kannan, S. (2005, July 2). Careers with GNU/Linux, Free Software for Engineers, and GNU/Linux workshop. MCA Department and M.Sc. IT students, St. Joseph's College of Engineering, Chennai, Tamil Nadu, India.
- Kannan, S. (2005, June 25). Introduction to Mambo CMS. GNU/Linux Vidyashram. Ma Foi Academy, Chennai, Tamil Nadu, India.

- Kannan, S. (2005, May 21). Introduction to L^AT_EX. GNU/Linux Vidyashram. Ma Foi Academy, Chennai, Tamil Nadu, India.
- Kannan, S (Volunteer). (2005, March 19-20). Carte Blanche 2005. Madras Institute of Technology, Chromepet, Chennai, Tamil Nadu, India.
- Subramanian, B. & Kannan, S. (2005, March 12). Careers with GNU/Linux, and Free/Open Source Software for Engineers. GNU/Linux Workshop. EEE Department, at Crescent Engineering College, Chennai, Tamil Nadu, India in association with IEEE Student Chapter, Crescent Engineering College, Chennai.
- Kannan, S. (2005, March 5). The GNU/Linux Desktop, Introduction to GNU Mach and GNU Hurd, and installation of GNU/Hurd. GNU/Linux and GNU Hurd Workshop. Kongu Engineering College, Erode, Tamil Nadu, India in association with Kongu Linux User's Group, KEC, Erode and Operating Systems Interest Group, KEC, Erode.
- Kannan, S. (2005, February 19). Careers with GNU/Linux, The GNU/Linux Desktop and Free/Open Source Software for Engineers. GNU/Linux/OSS Workshop. CSE Department, Anna University, Chennai, Tamil Nadu India in association with ACM Student Chapter, Anna University.
- Kannan, S. (2005, February 12). Installation of GNU Hurd. Indian Institute of Technology, Madras, Chennai, Tamil Nadu, India.
- Kannan, S. (2005, January 17). Careers with GNU/Linux, Free/Open Source Software for Engineers, and Introduction to Linux Device Drivers. GNU/Linux/OSS workshop. Kongu Engineering College, Erode, Tamil Nadu, India.
- Kannan, S. (2004, November 7). GNU/Linux Software Applications for Engineers and Technical Support. Indian Institute of Technology, Madras, Tamil Nadu, India in association with IEEE Forums, Student Chapter, Indian Institute of Technology, Madras.
- Kannan, S. (Volunteer). (2004, July 10). GNU/Linux Demo Day. Asan Memorial School, Chennai.

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