Airport Road
Bangalore
+91 9611800062
rdprabhu13@gmail.com
wnohang.net/about
rdprabhu
randomsurfer
ronin13
GPG: D72BE977

# Raghavendra Prabhu

## Education

2004-2008 **B.Tech.**, *National Institute of Technology Karnataka, (NITK) Surathkal*, *GPA*. 8.74

### Undergraduate thesis

title *Link-Based Object Classification and Ranking with unsupervised learning*

supervisors Dr. Santhi Thilagam

description Dealt with classification and ranking of web pages based on Link Mining and Self-Organizing Maps.

## Research Interests

Linux kernel/userspace, Databases, Machine Learning, GPGPU, Distributed Computing, Data Mining.

## Experience

### Vocational

2013 - Present **Product Lead**, Percona LLC..
As the Product Lead of Percona XtraDB Cluster, involved in the development and release of it.

2011 - 2012 **Senior Support Engineer**, Percona LLC..
Handled launchpad-related development work along routine consulting issues as well as supporting issues.

2008 - 2011 **Systems Engineer**, *Cloud Computing*, Yahoo! Research and Development, Bangalore.
Worked on memory mapped databases, replication, distributed hash tables and MySQL.I have implemented a readahead consumption of replication feeds for MySQL and an automatic failover implementation for database slaves among other things.

### Internship

2007 - 2007 **Programmer**, *Indygo Software Systems*, Bangalore.
Primarily worked on an application of speech recognition to phones with JTAPI using CMU Sphinx and was challenging in terms of interoperability.

## Publications

- *SOMGPU: Self Organizing Maps on a Graphical Processing Unit for Pattern Classification*: Published at IEEE Congress on Evolutionary Computation (CEC) which was part of IEEE World Congress on Computational Intelligence (WCCI) 2008. *Cited by more than 10 publications.* dx.doi.org/10.1109/CEC.2008.4630920
- *GNeuron: Parallel Neural Networks with GPU*: Presented at $14^{th}$ International IEEE Conference on High Performance Computing (HiPC) 2007. hipc.org/hipc2007/posters/GNeuron.pdf
  *Individual author in both.*

## Skills

**Languages** C, Python, Perl, C++, Shell scripting, Haskell, LaTeX.
**Operating Systems** Linux, FreeBSD
I am quite well versed in Linux kernel and GNU/Linux internals, virtualization platforms like KVM, VCS like git, bzr and mercurial, and also have worked on and contributed to several FOSS projects. I also possess an intimate knowledge of MySQL internals (Galera/InnoDB/XtraDB), XtraBackup internals, Percona Toolkit, memory-mapped databases, and distributed hash tables.

## Projects

*For more/recent FOSS projects visit wnohang.net/code and ronin13.github.com*

**Percona XtraDB Cluster** Have been responsible for several feature-rich releases of the product, architecting newer SST mechanisms, fixing long-standing bugs.

**Linux Kernel** I am involved in development/debugging of different areas of Linux kernel including but not limited to – filesystems (XFS, BTRFS), VM (Readahead), kbuilds, security, I/O; many of which are upstream, build-testing them with my KVM testing harness and reviewing commits of others. My git tree is here `http://goo.gl/KFfjs` with corresponding topic/feature branches.

**MySQL** I have worked on areas like fallocate for InnoDB tablespace extension, increment for Innodb single tablespace (located at `http://goo.gl/pgly0`), and also made several contributions to Percona Server, Xtrabackup and Percona Toolkit.

**Neural Cryptography** Implementation involves synchronization of two TPM (Tree Parity Machines) for secure key exchange with faster convergence.

**GNeuron** Neural network library making use of GPU (Graphical Processing Unit) for parallel computation (GPGPU) with nearly 5x speedup over its sequential counterpart.

**GPUSOM** Pattern Classification with Kohonen's Self Organizing Maps (SOMs) on GPUs using Accelerator, first of its kind in GPGPU ecosystem.

**Mushacadotnet** Adds an additional degree of freedom to computer mouse. First of its kind. This makes use of RawInput Win32 API and MouseHooks and is useful in scientific simulations/visualizations. Role:Team Leader.

**Getmail** Extended the mail delivery platform with a two-legged xoauth implementation; also fixed the ENOSPC handling with filesystems like ext4 and trimmed the fsyncs to reduce CPU load.

**Mounty/Xail** A Linux utility to manage plug-n-play external drives based on inotify and udev, and provision for custom mount configuration. Xail is a window manager written in python to provide toggle-based window switching with support for hooks.

**STM** An implementation of lock free solution to *Dining Philosophers* problem with Software Transactional Memory (STM).

## Achievements

- Presented talks at professional conferences: database conference PLMCE 2013 and FOSS conference FOSDEM 2013.
- Won $2^{nd}$ place in the event Mushaca, a three dimensional mouse design event. It is the first driver-less implementation of Mushaca.
- $2^{nd}$ place in Verisimilitude, an algorithm competition conducted during Engineer '07, an annual university fest.
- I also received the IEEE CIS (Computational Intelligence Society) Conference Travel Grant in the year 2008.
- I have authored a scientific work on the nature of *Time and Entropy* titled *Your Time and My Time and Time*. This was part of FQXi (Foundational Questions Institute) *The Nature of Time* contest.
- Mention of my work in the newsletter of ACM Special Interest Group on Genetic and Evolutionary Computation - SIGEVOlution.
- Secured $9^{th}$ rank in Karnataka Common Entrance Test (CET) for Engineering in 2004, in which more than a hundred thousand people compete.

## Additional Information

- Member of IEEE for a period of two years and of IEEE CIS (Computational Intelligence Society) for one year.
- I also underwent training on Enterprise Resource Planning (ERP) in Aircraft Division of HAL (Hindustan Aeronautics Limited) and a 30 hour workshop conduced by Accenture on the same.