



## Sunil Beta Baskar



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## Summary

I am an Embedded Systems Software Developer specializing in building Product platforms with open source and free software.

I have professional experience of more than ten (10) years from March 2001.

1. I have worked on the first ever port of Hard Realtime Linux (RTLinuxFree) to the Cirrus Logic CS89712 SoC which used an ARM7TDMI core, ARMv4 Instruction-set-Architecture.
2. I have created the earliest StrongARM PXA250 Hard Realtime Linux (RTLinuxFree) port on the Advantech SOCER 130 Platform.
3. I have created the earliest OMAP 1210 RTLinuxFree port, with support for DSP Bridge.
4. I specialize in working on Embedded GNU/Linux derived platforms and am an advocate of Open Source and Open Platforms.
5. I work closely with Hardware development teams to ensure that custom hardware designs can expose all the features required of a platform without design glitches that force software workarounds.

I have tinkered Computers from 1988 as an 8 year old, pursued it as a technical interest and finally my career.

As an interest and hobby, I devote my entire time to applying my skills or developing them towards Embedded and Portable Computing Systems.

I take up leadership roles wherever necessary, to facilitate teamwork in high-intellect technology teams.

## My Mission

"I strongly intend to be an active agent in initiating and facilitating Change in all my works. I prefer not to wait for change to happen."

## Work History

### Sourcery Pvt Ltd

Thanjavur, India

Jan 2012 - Present

#### Consultant

I offer specialized consultation service for those who want applications ported to Android or alternate Mobile-Cloud or Web interface.

This service is to improve efficiency of applications, power-usage and simplify user-interfaces using features available on specific Android Platform (Froyo, Gingerbread, Honeycomb, Ice-Cream Sandwich)

I also provide remote server administration services for non-governmental organizations and engineering colleges.

## Recommendations

"Sunil is very intelligent, and has deep experience in embedded software development. I would recommend him highly."  
- [Joseph Koshy](#), *Computer scientist, Software developer*

"Sunil's wealth of knowledge and his energy to get things done is what make him stand apart from the rest. He'll tell you why an embedded board isn't behaving the way it's supposed to and he can also get it to run, no matter other might think they've coded exactly as the documents say.

He also gets the processes organised and can take the company to prospective clients and convert them instead of him getting in action after there's a client ready."

[Amit Shah](#), *Senior Software Developer, Redhat*  
(worked directly with Sunil at Codito Technologies Pvt. Ltd)

## Projects

### Embedded Kit

Meant to be fill essential gaps in an embedded developers toolbox. All the features are listed here:

<http://sourceforge.net/projects/bkit/>

### Kollektive Linux

An Indianised Linux distribution that was my undergraduate project. Information, especially the code, design information is available at

<http://kollektive.8k.com/>

## Awards

**Shri R Sethuraman Award** for 'Academic Excellence' in Computer Science and Engineering. (2001)

## Parisutham Institute of Technology & Science

Thanjavur, India

Jan 2010 - Dec 2011

### Director - Technology and Incubation

To understand and bridge the gap between academia and industry, I worked closely with Parisutham Institute of Technology and Science (a nascent engineering institution affiliated to Anna University - Chennai).

I created an Incubation cell, centered around an in-campus Company and Student Association named '**Tech Brigade**' which uses '**bettermeans.com**' (an open source Apache wave derived workflow management solution) to facilitate students building new projects and spinning them off into new initiatives.

**Shri H Mahadeva Iyer Award** for 'Academic Performance', 'Wide Reading Habits', and performance in Extra-Curricular activities. (2001)

**LiveWire Team** award (at D-Link India Ltd.) for extended efforts in helping company personnel bond together through recreational activities. (2008)

## Freesystems

Bangalore, India

Mar 2009 - Dec 2009

### Consultant

I consulted and provided inputs to Freesystems, a startup specializing in Small Business Enterprise Servers integrating with the cloud.

During this period, I worked on OpenSolaris/Storage proposing solid state data storage solutions with improved wear leveling characteristics centered on algorithmic approaches. The test medium was MLC NAND Flash.

## D-Link India Ltd. R & D

Bangalore, India

Jun 2006 - Feb 2009

### Project Manager - EmSys Team

Joining D-Link R&D Bangalore, I built the EmSys team, forming a new System Software team and merging with the Hardware Platform development team. The resultant was a comprehensive Product Platform development team providing solutions to different Application vertical units.

I was instrumental in the launch of GVC-3000 and GVC-3100 desktop Videophone products based on i.MX27 Freescale Processors. These solutions used soft-realtime system software approaches to provide better A/V synchronization and echo-cancellation.

I incorporated within teams with unique know-how of building CMOS sensor modules, complete with Lenses for improving physical image clarity. I have experience in working with Transflective TFT LCD Modules which were custom-built.

## Linux Standards Base

Thanjavur, India

Feb 2005 - May 2006

### Consultant

I contributed to the Linux Standards Base, a comprehensive exercise to standardize Linux Distributions

My efforts involved building the lsb-install tool to make Software applications portable across various Linux distributions.

This is presently incorporated as part of linuxbase or lsb-base package in most new Linux Distributions for Desktop, Server and Embedded environments.

## Codito Technologies Pvt Ltd

Pune, India

Mar 2003 - Feb 2005

### Program Manager

I managed the Embedded System Services Division for Codito Technologies Pvt Ltd at Pune, providing Open Source Compiler Design and Operating System Ports to New Instruction Set Architectures (ISAs).

The members of the Compiler team eventually became a core part of the GNU Compiler team (GCC). A unique Operating System aware (Kernel Aware Debugging) system was created for TI OMAP2 series processors.

Professional services were provided to several companies who needed complete embedded system platforms on custom hardware, before deploying applications and creating new appliances.

During this time, I facilitated Codito in liasioning and becoming a core development partner of FSM Labs, headed by Victor Yodaiken, creator of RTLinux.

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## Innvo Systems Pte Ltd

Singapore, Singapore

Feb 2002 - Feb 2003

### Product Manager

I managed Open Source Hard Realtime Solutions based on Embedded Linux and worked on an end-to-end in-car Telematics Product for a renowned Automotive Company in the US.

A unique echo cancellation framework for the MSM7731-02 from OKI, which allowed realtime reconfiguration of echo and noise-cancellation characteristics was created during this effort. This was designed to interoperate with the ALSA (Linux Sound) framework..

I setup the Tech Team and tools framework for the off-shore division of "Innvo Systems Pte Ltd." in Bangalore tasked with developing a new Mobile Application Stack that later became JuzzMobile.

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## Codito Technologies Pvt Ltd

Pune, India

Mar 2001 - Jan 2002

### Linux Kernel Developer

In this role, *I created the first ever port of RTLinuxFree to ARM Processors.*

This was proven specifically on the CS89712 Cirrus Logic SoC based on the ARM7 core using the CDB89712 platform.

I developed an Operating System Instrumentation framework for a custom Micro-kernel. The instrumentation tool was entirely written in Perl and used internal register data collected from a Microprocessor simulator whose architecture was also under simultaneous development.

I acted as the Services Liasion with Redhat India Pvt. Ltd. providing them with consultation on Embedded Linux for their customers.

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## Reboot Systems Pvt Ltd

Thanjavur, India

Mar 1998 - Feb 2001

### Founder and Technical Consultant

While I was undergoing my Engineering course, as a co-founder and entrepreneur I created "Reboot Systems Pvt Ltd", a PC/Clone troubleshooting company with Mr. Badrinath Nageswaran.

We solved PC problems with a unique set of home-baked tools with an 'Inverse-Time' billing model.

We also developed a model to ensure that solutions could be delivered on time promised to the clientele with the help of an expert business advisor.

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## Education

### Shanmugha College of Engineering (now SASTRA)

Thanjavur, India

Apr 1997 - Apr 2001

## B.E., Computer Science and Engineering

1. In my Undergraduate studies, I specialized in "Computer Science & Engineering"
2. My core interests are System Software and Operating Systems.
3. I passed this course with Distinction, and was awarded an overall score of **76.21%**

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## NIIT

Thanjavur, India

Aug 1995 - Oct 1998

### Honorary Diploma in Software Management (HDSM)

1. I had an early introduction to databases (SyBase at that time) and Unix (Solaris).
2. As part of my project work here, I created a Resource Booking System for Library Management and Computer Room Booking that was entirely customizable using FoxPro and "Wizard" styled Dialog Boxes.
3. I received **82.1%** and was graded 'O' for Outstanding performance.

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## Don Bosco Matriculation Higher Secondary School

Thanjavur, India

Mar 1995 - Mar 1997

### Higher Secondary Certificate, Computer Science

1. Completed my Higher Secondary (also referred to as Pre-University) majoring in Computer Science.
2. I was also the School's System Administrator for a set of fifteen (15) IBM/PC Clones and played a role in migrating to Pentium workstations in 1995-96.
3. I am proud to be in the Roll of Honor, having secured the highest marks in my batch at **92.17%**

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## Don Bosco Matriculation Higher Secondary School

Thanjavur, India

Mar 1990 - Mar 1995

### Matriculate, High School

1. I received my Matriculate in basic Physics, Chemistry, Math and Biology.
2. I was also a Founding President of the Computer Club and System Administrator of the Computer Lab (from 1992). This aided in my strong experience in Computers.
3. My overall score was **86%**

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## Skills

### Linux Kernel Driver Development



(Expert)

7-9 Years Experience, (Currently in use)

1. My primary focus is to work on the Linux Kernel. I have worked on 2.2, 2.4, 2.6 and the current 3.0 series of the linux kernel.
2. I provide solutions on Realtime Linux (scheduling extensions) based on 2.4, 2.6 and 3.0 series of the Linux kernel. I am familiar with RTLinux, Adeos Cascading framework, Linux Realtime Scheduling mechanisms.
3. I specialize in the Video for Linux (V4L2) framework, the ALSA framework and core code for the *ARM* architecture. I have worked on Camera Sensors, Display Panels, Digital Microphones and Analog Speakers. I also work on the bootstrap code of the kernel and the scheduler.

## Debugging and Troubleshooting System Software



(Advanced) 5-6 Years Experience, (Currently in use)

1. I specialize in finding core reasons for unanticipated or unacceptable behavior of system software.
2. I have unique expertise in being able to home in on the root cause of the problem quickly and therefore find the exact type of fix needed.
3. I have also been credited as a 'Disaster Manager' while deploying this skill within a team and augmenting their performance.

## Technical Interviewer



(Advanced)

5-6 Years Experience, (Currently in use)

1. I have been able to consistently screen, interview and rate individual technical capabilities within a short time frame. This has helped me determine their technical suitability for a particular role.
2. I have been Interviewing candidates in almost all my Job Roles.
3. I have closely worked with HR personnel specifically for recruiting Technical Staff working on Embedded Systems and GNU/Linux platforms.

## Technical Presentations



(Expert)

7-9 Years Experience, (Currently in use)

1. I have advanced presentation design and delivery skills honed over several years. This has helped me in being part of several roadshows and product launches. I have given technical presentations on Linux Kernel Design to several teams.
2. I have briefed corporate executives on Intellectual property law, specific to incorporation of open source components in commercial products in all my roles involving Product engineering and development.
3. During my work as Director-Incubation at PITS, I have designed and delivered several technical workshops on Open Source, Embedded Systems with hands-on experience using an Oasis(r) Development platform.

## Team Leadership and Administration



(Advanced)

5-6 Years Experience, (Currently in use)

1. I have held Management and Administrative roles in all my Professional Designations.
2. I have a strong urge to work with people as a team, and believe that the team can achieve much more than an individual.
3. I specialize in ensuring high standards of documentation, adhering to deadlines, streamlines process management and quick, firm decision-making.

## System Administration (Expert)



7-9 Years Experience, (Currently in use)

1. I have extensive experience in Administration of systems at various scales. I have been maintaining and managing servers catering to over 500 users as an addition in my earlier designations.
2. Being heavily interested in computers from childhood, I maintain a small network for my personal use with over 10 computing terminals aside from my phone and tablet.
3. I have maintained networks with 3 nines (99.9%) reliability and specialize in deploying commercial off-the-shelf (COTS) hardware as servers for small and medium businesses. I

have been managing routers and webservers, running Linux augmented with the Xen hypervisor and Oracle Virtualbox.

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## Objective

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This CV is to highlight my core skills and list my qualifications.

I intend to create and be part of an Embedded system software and platform services team that specializes in enabling application developers by building on new Processor Architectures and making all features of hardware easily accessible to application developers and Product Architects.

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## Interests

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I also contribute independently to Open Source projects using bleeding edge versions and reporting issues.

1. I maintain a website that showcases all my interests at [www.sunilbetabaskar.com](http://www.sunilbetabaskar.com) (which is consistently updated from 2004.)
2. I blog at [betasector.blogspot.com](http://betasector.blogspot.com) which focuses on my non-technical interests.
3. I maintain a photography portfolio on [500px.com/beta](http://500px.com/beta)

I have artistic interest in

1. drawing Pencil Sketches
2. restoring old Photographs using Digital Photo manipulation tools
3. photographing natural scenery

I read

1. History ( Roman, Greco-Roman, Egyptian Middle Dynasties )
2. Anthropology ( Inspired by Carl Sagan )
3. Science Fiction ( Neal Stephenson, Stephen Baxter, Isaac Asimov, Michael Crichton, Philip K Dick, Robert Heinlein )

I play

1. Chess ( Intermediate Level )
2. Table Tennis ( Intermediate Level )
3. Pool ( Intermediate Level )

I write

1. Essays (Socio-Technical, Technical and General Topics)
2. Fiction (Fan Fiction, Science-Fiction)
3. Non-Fiction work (Translations, Bibliographic Studies, Strategy, Science - for general reading)

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This next-generation resume was created using VisualCV

