

# Kartik Singhal

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## Résumé

### Education

- 2009 – present **Bachelor of Technology in Computer Science and Engineering**, *National Institute of Technology Calicut*, Kerala, India, *CGPA up to 6 semesters - 8.53 on a scale of 10*.  
Expected to complete in 2013.
- 2008 **AISSE**, *DAV Public School Sahibabad*, Ghaziabad, UP, India, *88%*.  
Class XII Examination, conducted by CBSE, New Delhi
- 2006 **AISSE**, *DAV Public School Sahibabad*, Ghaziabad, UP, India, *92.8%*.  
Class X Examination, conducted by CBSE, New Delhi

### Areas of Interest

- Compilers and Operating Systems (Linux Kernel & Android)
- Computer Architecture, Web Development

### Projects

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|--------------------------|--|
| Title                    | <i>A Study on Virtual Machine Monitors and Implementation of a Simple Operating System for x86 Architecture</i>  |
| Languages                | C, x86 Assembly, Bash shell  |
| Description              | Semester 6 Mini Project done in a group of three. Project involved a comprehensive study of the recent x86 virtualization extensions and the design and implementation of a simple operating system kernel from scratch for x86 architecture with basic features like global and interrupt descriptor tables, interrupt handling, paging, and support for monitor & keyboard.  |
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| Title                    | <i>Website of CSED NIT Calicut</i>   |
| Languages & Technologies | <i>Development</i> - XHTML, CSS, Drupal, PHP; <i>Deployment</i> - Apache, MySQL, CentOS, Sendmail  |
| Description              | An independent project done under Prof Vineeth Paleri – new website for the Department of Computer Science & Engineering, NIT Calicut. The goal was to create a reliable, error-free and, above all, a maintainable system to provide up to date information related to the department. The final deployment also involved configuring a CentOS based Linux server from scratch for hosting multiple websites and sending mails. The website can be accessed at <a href="http://cse.nitc.ac.in">cse.nitc.ac.in</a> . |
|                          |  |
| Title                    | <i>NITC Campus Radio Portal</i>  |
| Languages                | PHP, PostgreSQL, HTML, CSS   |
| Description              | Semester 4 DBMS course project done in a team of two – a portal developed for NIT Calicut's upcoming student-run Campus Radio. Representing radio jockeys' profiles, archives of the previous shows and providing an easy interface for the content editors of the website were the primary objectives. Code and docs available at <a href="https://github.com/k4rtik/Campus-Radio">github.com/k4rtik/Campus-Radio</a>   |

### Technical Skills

#### Programming Languages & Technologies

- Proficient C, Python, Shell (Bash) Scripting, (X)HTML, CSS, SQL (MySQL and PostgreSQL)
- Familiar C++, Java, MIPS & x86 assembly language, PHP, OCaml, lex, yacc, understanding of UNIX Sockets API, POSIX Threads, basic configuration skills in Apache, Sendmail

#### Operating System Platforms

GNU/Linux (both Debian and RedHat based systems, intermediate skills in System Administration), all major versions of Microsoft Windows and MS-DOS

## Version Control Systems

Good experience with Git – [github.com/k4rtik](https://github.com/k4rtik)

## Web Frameworks & Content Management Systems

Django, Drupal, Wordpress

## Authoring & Graphics

L<sup>A</sup>T<sub>E</sub>X, LibreOffice, MS Office, GIMP

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## Technical Blog

Kartik Scribbles...([k4rtik.wordpress.com](https://k4rtik.wordpress.com)).

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## Activities

- **Secretary** - Computer Science and Engineering Association (CSEA), NIT Calicut (2012-13).
- **Co-organizer** - TEDxNITCalicut 2013 – [tedxnitcalicut.com](https://tedxnitcalicut.com)
- **Student Lab Admin** - Software Systems Lab, CSED, NIT Calicut (2012-13).
- **Server Admin** of CSED Web Server hosting CSED website and CSE EduServer ([eduserver.cse.nitc.ac.in](https://eduserver.cse.nitc.ac.in)), NIT Calicut (2011-present)
- **Organizing Team Member & Web Team Lead** - TEDxNITCalicut 2012
- **Event Manager** - Tux of War, a bash scripting competition, conducted during Tathva '11 at NIT Calicut – [tuxofwar2011.appspot.com](https://tuxofwar2011.appspot.com)
- **Speakers Manager** - FOSSMeet 2011 - an annual free and open source software conference at NIT Calicut – [fossmeet.in/2011](https://fossmeet.in/2011)
- Co-ordinated & helped organize various technical events with **Free & Open Source Software Cell**, NIT Calicut (FOSSCell) – [fosscell.nitc.ac.in](https://fosscell.nitc.ac.in) (2009-11).

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## Awards & Accolades

- 3<sup>rd</sup> prize in “Max Brayne” Technical Quiz, CSA Open Days 2012, IISc Bangalore.
- 2<sup>nd</sup> prize in Slash Bin Slash Bash (online bash scripting contest), Excel 2011, [excel2k11bash.appspot.com](https://excel2k11bash.appspot.com)
- 2<sup>nd</sup> prize in Code Maestros (2010), annual coding competition conducted by CSEA, NIT Calicut.
- 2<sup>nd</sup> prize in Tux of War (bash scripting competition), Tathva 2009, NIT Calicut.
- 3<sup>rd</sup> prize in Befunge, an esoteric programming language based coding competition, Tathva 2009.
- 20<sup>th</sup> rank in final round of 7th National Cyber Olympiad conducted by Science Olympiad Foundation in 2008.

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## Conferences, Workshops, Summer Schools Attended

- CSA Undergraduate Summer School, IISc Bangalore (July 9-14, 2012) – [www.csa.iisc.ernet.in/sem-evts/summerschool](http://www.csa.iisc.ernet.in/sem-evts/summerschool)
- Essential Abstractions in GCC '12 - A (4-day) workshop on GCC Internals by GCC Resource Center, IIT Bombay – [www.cse.iitb.ac.in/grc/gcc-workshop-12](http://www.cse.iitb.ac.in/grc/gcc-workshop-12)
- Texas Instruments' Sitara AM335x (2-day) Workshop, Bangalore (June 2012) – [www.endtoend.in/ete2011/TI/events/mailer5.html](http://www.endtoend.in/ete2011/TI/events/mailer5.html)
- Rootconf Bangalore 2012 – [rootconf.in/bangalore2012](http://rootconf.in/bangalore2012)
- FOSS.IN 2010, Bangalore – [foss.in](http://foss.in)
- PyCon India 2010, Bangalore – [in.pycon.org/2010](http://in.pycon.org/2010)

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## Interests

Reading Science Fiction, Biographies, Non-Fiction

Photography Love clicking timely snaps with my phone's camera.

**Declaration:** The information I have provided is true to the best of my knowledge and belief.

(Last Updated: July 26, 2012)

**Kartik Singhal**