

## Aditya Kumar

Software Development Engineer

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### Education

2012-2016	National Institute of Technology, Calicut Bachelor of Technology, Computer Science & Engineering	9.37/10
2011	12 <sup>th</sup> standard All India Senior Secondary Certificate Examination (AISSCE) Central Board of Secondary Education(CBSE)	94.6%
2009	10 <sup>th</sup> standard All India Senior Secondary Examination (AISSE) Central Board of Secondary Education(CBSE)	91.0%

### Work Experience / Projects

June 16-Present	<b>Software Development Engineer at Sandvine Technologies</b> <ul style="list-style-type: none"><li>As part of developer in Protocols team, I continuously work to enhance the existing network Traffic recognition by either adding new <b>Traffic recognition capabilities</b> or improving the existing ones</li><li>Added the recognition capability in loadable traffic identification package (LTIP) for many applications both as part of internal request as well as on <b>direct request of customers</b></li><li>Recently started analysis of applicability of <b>Machine Learning techniques</b> in Traffic recognition for many top applications that uses state of the art encryption.</li><li>Currently working on a project aimed at developing a <b>Game Crawler</b> to track updates of games by major game providers like EA, Steam, XBOX, Play Station, etc. The goal is to track for updates in any of the games that we identify as well as to help and identify new and popular games.</li><li>Working on an already existing Application Crawler to enhance the capability by adding functionality to track any new and popular application like <b>Pokemon Go, Super Mario Run</b>, etc.</li><li>Successfully worked on enhancements which were <b>performance critical</b> where the goal was to do an important addition to an existing subsystem without degrading the performance</li><li>Successfully improved performance degradation of LTIP from 4% to 0.1% which was caused by an addition of a new feature into the system</li></ul>
July 15 – May 16	<b>Kernel based simulation of Rollback sensitive Memory Architecture (Final year Project)</b> <ul style="list-style-type: none"><li>Project aimed at improving the security of <b>virtual machines</b> in <b>cloud computing</b> environment. The area of focus was <b>rollback related</b> security issues.</li><li>Successfully implemented <b>CIP (confidentiality and integrity protocol)</b> table in <b>Xen Hypervisor</b> which is used to restrict access at the physical frame level.</li><li>Augmented CIP table with <b>RSDM table</b> logic which stores the information about the rollback sensitive pages, set of pages that a cloud customer want to prevent rollback of.</li><li>Made changes in both the Xen kernel as well as in Linux kernel to complete the implementation of <b>Extended-HyperWall</b> architecture which is combination of CIP and RSDM table.</li><li>A paper has also been sent for publication in <b>ACM</b> which is awaiting approval.</li></ul>
May-July 15	<b>Recruitment Application for InApp Inc. (Summer Internship)</b> <ul style="list-style-type: none"><li>The project was aimed to develop a web application that will serve as a common platform for the recruiters in InApp to facilitate the recruitment process along with the service to communicate messages to the applicants.</li><li>The application enables the company to store and view the applicant's profile, manage the recruitment process by scheduling various rounds of interviews, updating the interview calendar and results.</li><li>The application enables the HR personnel to add applicants online and set up their job profile by providing relevant details and if required, modifying them later. It also enables the applicants to receive email alerts if they qualify for the next round as well as to the concerned panel members for each interview.</li><li><b>MVC architecture</b> was used with PHP as backend whereas JavaScript, jQuery and CSS were used for the frontend part</li></ul>

June-Oct' 14	<ul style="list-style-type: none"> <li>• Was involved in each stage starting from requirement gathering, prototyping and database design to deployment</li> </ul> <p><b>Android application for Technical festival of NIT Calicut</b></p> <ul style="list-style-type: none"> <li>• Was responsible for the backend of the application and being the senior member of the team, I had additional responsibility to be in constant touch with GUI team so that the developers work is in sync with the GUI team.</li> <li>• Wrote codes for <i>Announcement</i>, <i>Share your experience</i> and <i>wish list</i> features of the application.</li> <li>• <i>Share your experience</i> – this activity allows user to take a picture/video and share it on various social network sites. The picture gets stored in the “Tathva” folder and there is also an option of selecting any picture/video to share.</li> <li>• <i>Wish list</i>- as the name suggests, is basically a list of the events that the user has marked under favourites. For each event like lecture, workshop, competition etc. there is a button named <i>add to wish list</i>. When the user clicks this button, the event gets added to the wish list. This activity mainly uses the database to save the information.</li> <li>• <i>Announcement</i> – mainly aimed for managing team to give real time updates to the user about the events.</li> <li>• Link to .apk file of the application – <a href="https://play.google.com/store/apps/details?id=org.tathva.triloaded.mainmenu">https://play.google.com/store/apps/details?id=org.tathva.triloaded.mainmenu</a></li> </ul>
Aug-Sept'14	<p><b>Android application for college going students</b></p> <ul style="list-style-type: none"> <li>• Application intends to make day-to-day life of college going students easier.</li> <li>• I worked mainly on the backend of the application</li> <li>• Wrote the functionalities of Library due tracker, Quick caller, Attendance recorder and Task scheduler</li> <li>• <i>Library due tracker</i> – This feature allows the students to keep track of the books that they got issued from the library. Main aim of this feature is to help students avoid the unnecessary fines that they bear because of late return of books</li> <li>• <i>Quick caller</i> – Keeps all the college related contacts at one place and with just one button click, student can make call to the desired contact</li> <li>• <i>Attendance recorder</i> – Keeps the absence count in each of the subjects. Main aim of this feature was to help students in avoiding attendance shortage</li> <li>• <i>Task scheduler</i> - This allows students to keep track of the normal tasks like assignment submission, class test, etc. This feature gives notifications on the front screen, timing of which is decided by the student itself</li> </ul>

### Technical Skills

Languages	C++, C, Java(Prior Experience)
Web	MySQL, HTML, JavaScript, jQuery, PHP, CSS
Technologies	

### Additional Information

- Merit Certificate by CBSE for reasons of outstanding academic performance and for being among top 0.1 % of successful candidates who scored (100%) in Mathematics and (99%) in Chemistry **AISSE-2011**
- Awarded certificate and cash prize by Kendriya Vidyalaya Sangathan (KVS) for being among top 1% of total KVS students who appeared in **AISSE**.