

Akshay Jain

B.Tech, Computer Science & Engineering
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Education

Examination	Institute	Year	CPI /%
B.Tech, CSE	IIT, Hyderabad	2013	8.56
Intermediate/+2(CBSE)	Central Academy ,Kota	2009	89
Matriculation(RBSE)	Central Academy , Jodhpur	2007	86.66

Computer Proficiency

- **Programming Language:** C/C++, Java, Perl *, Python*.
- **Web Designing:** HTML, PHP, JavaScript, JSP, Mason*, CakePHP*, Struts*.
- **Software Development Tools:** Lex, Yacc, Perforce.
- **DBMS:** MySQL, PostgreSQL.
- **Operating System:** Windows and Linux.

*Basic Knowledge

Courses Undertaken

Mathematics Behind Machine Learning, Predictive Analytics & Knowledge Discovery, Neural Network, Principles of Programming Languages, Language Translators, Computer Networks, Operating Systems, Database Systems, Data Structure and Algorithms, Advanced Algorithms, Analyzing and Managing Large Data, Theory of Computation, Computer Organization, Probability and Numeric Method

Work Experience

- **Software Development Engineer, Microsoft** **July 2013 - Present**
- **Software Development Engineer Intern, Amazon** **May 2012 - July 2012**
 - 1) Automatic AndonCord Reinstatement
 - 2) Top 1000 Asin's
 - Worked on server side API's. Created a new work-flow and implemented it in Java.
 - Wrote the Test cases for the current project and its preceding project using EasyMock and PowerMock.
 - Restructured and refactored the new and the previous code.
 - Fixed 7 bugs which included both the server side and the client side issues.

Key Projects

- **System-Wide Process Viewer** **Nov 2012 – Dec 2012**
 - Designed and developed a monitoring tool for administrative tasks across the system.
 - Includes features to analyze load and resource utilization in various machines.
 - Implemented **port scanning** for all the connect system, **XML RPC** calls to get system details and Swing for GUI.
- **MuBase, Database Management System** **Oct 2011 – Nov 2011**
 - A mini Database Management System with buffer pool manager, storage mechanisms, disk management system and relation manager along with B+ tree indexing.
 - MuBase has been designed using object-oriented paradigm and the implementation is in C++.

Our work was adjudged the best among all and passed on for further development.

- **Process Scheduling and Memory Allocation Algorithm, Minix 3.2.0** **Sep 2012 – Nov 2012**
 - Implemented **Lottery** Scheduling and **Multi-level Feedback Round Robin** Scheduling. Modified the user-space scheduler of Minix to implement the scheduling algorithms.
 - Implemented various allocation algorithm **First fit, Last fit, Worst fit, Best fit** and **Random fit**.
 - Implemented a system call to change the allocation strategy and a process to collect the statistics
- **Lonely Runner Conjecture, Open Problem** **Aug 2012 – Nov 2012**

B.Tech Mini Project, Assistant Professor Subrahmanyam Kalyanasundaram

 - Understand and analyze the conjecture for 6 and 7 runners, and try to provide a shorter proof for 7 runners and solve it further for more runners.
- **PL/0 Compiler** **Jan 2012 – April 2012**
 - Implemented a PL/0 compiler with panic mode error-recovery based on Bottom-Up approach.
 - Used Lex and Yacc for the above implementation.
 - Also implemented a Top-Down parser for Extended Backus-Naur Form (EBNF) grammar.

Other Projects

- **Evaluation of Relational Algebra Expressions** **Aug 2011**
 - Implemented the six basic relational algebra operations over delimited files. Complex expressions using these operators could be constructed using a custom syntax.
 - Operators were implemented in C++ and the parser was written using Flex and Bison.
- **Restaurant Portal** **Aug 2011 – Sep 2011**
 - Designed and developed a restaurant portal using MVC architecture.
 - Used JAVA servlets, JDBC and PostgreSQL at the backend.
- **Placement's Portal** **Aug 2012 – Sep 2012**
 - Designed and developed the placement's portal for IIT Hyderabad.
 - Used Struts and PostgreSQL for the development.

Academic Achievements

- Secured an **All India Rank of 2357** in **IITJEE 2009** among 0.4 million students.
- Secured an **All India Rank of 1500** in **AIEEE 2009** among nearly 1million students.
- Currently having **Department Rank 6th** in a batch of 38 students.
- Awarded a Scholarship of 31,000 from **Medhavi Chhatra Protsahan Pariyojna** for securing excellent marks in 10th standard.

Positions of Responsibility

- **Finance and Marketing Core, Elan 2011** an annual technical-cum cultural festival.
- **Coordinator, Training & Placement Cell** for year **2012-2013**.
- **Class Representative** of the batch for year **2009-2010**.
- Member of **Dining Hall Committee** for year **2010-2011**.
- Member of **Farewell Organizing Committee** for farewell of class of 2012 batch.

Extracurricular Activities

- Part of the NSS (National Service Scheme) in the first year. Taught young children in various schools around the campus.
- Member of **Institute's NSO Football team** for year **2011**.