# Ayuluri Aravind Reddy

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## Education

| Year | Degree/Certificate | Institute | CGPA/Percentage |
|---|---|---|---|
| 2017 | Graduation in CSE | IIIT - Hyderabad | 7.78/10.0 (6 semesters) |
| 2013 | Intermediate | Narayana Junior College, Vijayawada | 96.3% |
| 2011 | SSC | Little Hearts High School, Madhira | 93.8% |

## Scholastic Achievements

- Was named in the **Deans Merit List** for excelling in academics.
- Open source enthusiast and contributed to **Sympy** and **Telegram** by fixing and raising several bugs.
- Certified for completion of courses **Programming Mobile Applications**, **Algorithmic Toolbox** in Coursera.
- Secured All India Rank (AIR) **4879** in IIT-JEE 2013 out of around 1.5 lakh students.
- Secured **284** marks out of 360 in JEE-MAINS 2013.

## Work Experience

**Android Developer Intern** *Summer '16*
*Samosa Labs Software Solutions Pvt Ltd*
- Developed an Android Group Chat Application which helps people to communicate easily.
- Implemented several crucial functionalities such as creating a temporary group inside a group, sending and receiving xml requests and responses, included smilies.

**Android Developer Intern** *Summer '15*
*Viven Informedia Pvt Ltd*
- Developed an Android app, SADDAHAQ, which allows users to write and read articles about current social affairs.
- Implemented the functionality of creating and editing articles, townhalls etc.

**Android Developer Intern** *December '15*
*Omitra, Train Social App*
- Implemented a functionality of finding fluctuations in the signal strength, so as to reduce the power consumption of Mobile on a move.

**Teaching Assistant** *Monsoon '16*
*Under Prof Suresh Purini, CVEST*
- Teaching Assistant for the course Complexity and Advanced Algorithms offered to students at the University.

## Major Projects

**Transitive Closure** *Spring '16*
*Guide: Prof Kishore Kottapally, C-Star, IIIT-Hyderabad*
- Transitive Closure is one of the interesting problems in Computer Science Industry. This project aims at parallel techniques to achieve that for Directed Sparse Graphs with single and multiple sources.
- Currently there is a decent algorithm to find that for Directed Dense Graphs.
- Prof J.D.Ullman of Stanford University proposed a High Probability Parallel Algorithm for Sparse Graphs with single and multiple sources in his paper with M.Yannakakis.
- We, currently, are studying and implementing those algorithms to analyse the results.

**Bond Liquidity Prediction** *Autumn '16*
*Guide: Prof Vikram Pudi, CDE, IIIT-Hyderabad*
- A corporate bond is a debt instrument issued by companies to raise money for business operations.
- Given the data of several bonds(Data for three months), the buy and sell volume for each bond over the next 3 days immediately after the aforementioned period is to be predicted.
- Implemented using the xgboost libraries.

**Face and Eye Detection** *Spring '16*

*Guide: Prof Bapi Raju*

- A course project aimed at detecting faces and eyes, given an image as input.
- We followed the algorithm given by Viola and Jones and implemented the project in Python using openCV, as it already contains pre-trained classifiers for faces and eyes.

**Wikipedia Search Engine** *Autumn '15*

*Guide: Vasudeva Varma, Professor and the Dean (Research & Development)*

- Designed and developed an efficient search engine to query archived Wikipedia documents of size 42GB, using secondary indexing and 2- phase merge-sort.
- Developed and tested TF/IDF-based heuristics to rank relevant Wiki pages. Achieved mean response time of 500 milli seconds.

**StampitGo** *Autumn '14*

*Guide: Prof. Y Raghu Reddy*

- It is an Android Application which rewards users for their loyalty. It ensures offers based on their interests.
- Here the target was to get familiarised with the project life cycles etc.

## Minor Projects

**Apriori Algorithm**

- Implemented the famous Frequent Item-set Mining as part of a course in python. Besides the item-sets, corresponding Associative rules were also mined.

**Eigen Values**

- This project aims at computing the eigen values of a Symmetric Matrix in parallel. Implemented it in C++ and used openMP to create and use multiple threads.

**SQL Engine**

- Implemented a mini SQL query parser and executor in Python to manipulate and retrieve data in csv files with appropriate error handling.

**Ultimate Tic-Tac-Toe**

- Developed an intelligent rational bot which takes the best possible decision in Tic-Tac-Toe game.

**Creating a Proxy Webserver**

- We were to implement a caching web proxy that is able to handle concurrent clients through the use of multiple threads of execution, one per client request. Programming language used is Python.

**Bash Shell**

- A Linux terminal implemented in C++ using concepts of fork, exec, signals, pipes etc. Different kinds of interrupts were also handled.

**Pharmacy DB**

- Developed a raw PHP Application as a prototype for explaining better way of storing values in tables for a Pharmacy Database.

## Relevant Courses

- ***Electives:*** Complexity and Advanced Algorithms, Database Systems, Statistical Methods in AI, Game Theory, Data Warehousing and Data Mining.
- ***Core:*** Structured Systems Analysis and Design, Data Structures, Algorithms, Parallel Processing, Operating Systems, Graphics, Computer Networks, Artificial Intelligence.

## Computer Skills

- ***Languages:*** C, C++, Python, PHP, MySQL, HTML, XML
- ***Operating Systems:*** Windows, Linux(ubuntu), Android
- ***IDEs and Tools:*** Android Studio, Eclipse, Git, xgboost, openCV, openGL, openMP

## Extra Curricular Activities

- Felicity Buzz coordinator - 2014.
- Cultural House Captain for the Academic year 2014/15.
- Was honored as Mr.Flair of the batch for astounding performance in dance.
- Won runner-up cup as Kho-Kho captain - 2014.
- Won several medals in University Annual Sports.