

# Pooja Mahadev Soundalgekar

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## Git & LinkedIn

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## Technical Skills

### Programming Languages-

C, C++, Java, Python, CSS3,  
PHP, QBasic, XSLT

### Markup Languages-

HTML, XML, XHTML

### Database-

MySQL

### Client Scripting Language-

JavaScript

### Tools-

Android Studio, Eclipse,  
NetBeans, Latex, Scilab,  
Matlab, CPanel, Selenium

### Web-Framework-

Meteor-JS Framework

### Version Control-

Git

### OS-

Windows, Linux

### Unix Shell Programming

## Education

### B.Tech in Information Technology

2014 - 2018

National Institute of Technology Karnataka, Surathkal, India

CGPA: 9.12/10 (May 2016)

### High School- Venkat International Public School, Bangalore (CBSE)

2005 - 2014

CBSE XII Board: 96.2%

CBSE X Board: 10/10 CGPA

## Work Experience

### Research Intern at FOSSEE, IIT Bombay

Mumbai, May 2016 - July 2016

Developed an open source LabVIEW equivalent - Xcos on web (Xcos is a Scilab module). Xcos on web is a browser software which can be used on Mobile devices and does not need installations like in Simulink and Scilab's in-package Xcos. Worked on the webpage's GUI using mxGraph. Prototyping of Xcos block data structures and conversion of their sci file data to js format with testing and debugging the files. Implemented calling of scilab instance using Xcos API and worked on AJAX code to send Xcos file as a blob to the java servlet running on the server which computes and sends back output on the browser.

### Intern at Zeuristech Enterprise Networks Pvt. Ltd (ZEN)

Pune, December 2015 - January 2016

Understanding whether Software being developed required Android or a Hybrid Platform. Developing and testing Hybrid App in PhoneGap and Meteor and comparing their results. Finished tasks like debugging and testing .jsp and .html files of ZEN's website, database management on ZEN's website's HTML forms using PHP, JS and MySQL.

### Software Engineering Intern at Discount To Students- Startup

Bangalore, December 2015

Analysing Meteor Packages. Prototyping and then developing a Hybrid App in Meteor which uses Google JS API and Google Distance Matrix API to get road distance between two locations. App implemented to show a person at a given location a list of hotels near him within a given distance range. Hotels based on their offers and food rating.

## Projects and Workshops

### Plethora- E-Commerce Website with IBCF Recommendation System

August 2016 - November 2016

Developed an e-commerce website with HTML, CSS Bootstrap, PHP and MySQL database (3CNF form). Web Scraping from various e-commerce websites to generate a user item rating specific data set. An Item Based Collaborative Filter (IBCF) was built to generate recommendations of products for every user. The recommendation algorithm programmed in python, implemented Adjusted cosine, Correlation and Cosine similarity. Weighted prediction technique was used to generate recommendations.--HTML, CSS, PHP, MySQL and Python

### Parallel and distributed approach to Connected Component Labelling

August 2016 - November 2016

Connected Components Labelling (CCL) is important concept in computer vision and image processing. The project implemented the naive approach, Suzuki's Algorithm and Two Pass Algorithm for CCL in Binary Images. The serial algorithms parallelized using pipeline architecture achieving significant thread level parallelism using openMP directives and also distributively run across processors using Open MPI directives.--C, openMP and Open MPI

### Automata for Chain Reaction Game

August 2016 - November 2016

The GUI is implemented using HTML and CSS. The game's algorithm and computations are performed using JavaScript. Developed new Finite State Automata for the heuristic of the game and compared it with the existing backtracking tree algorithm approach. --HTML, CSS and JS

## Area of Interest

Design of Algorithms  
Theoretical CS  
Automata & Compiler Design  
Networking  
Software Analysis & Design

## Extra Curricular

NITK Campus Ambassador-  
HackerEarth (Developer  
Community)  
Executive Member-  
IEEE-NITK Student Branch  
Member-  
Web Enthusiast's Club, NITK  
Member-  
'Engineer'(technical fest,  
NITK) Computer Committee  
Competitive Coding-  
Codechef- p1s3  
Hackerrank- pooja\_m\_s  
IEEE Xtreme 9.0- AIR 62

### Raspberry Pi 2 Car- IEEE Project

January 2016 - March 2016

Developed a car that is powered by a Raspberry Pi that follows a object which is tagged with an image. The Pi uses image processing to detect and determine direction of motion of the object based on the resizing and reshaping of the image and then controls the motors of the car making it turn and change speed accordingly. --Python and OpenCV

### Multiple Face Emotion Recognition

January 2016 - March 2016

Trained data set containing multiple emotions. Detected emotions like sadness and happiness by implementing a regression algorithm. Optimized code for detecting multiple faces at angles and incomplete faces. Software developed to implement the idea of checking if the people in a conference are happy or sad in the conference- An automatic alternate to feedback form. --Python and OpenCV

### Uni-player Scrabble Game

January 2016 - March 2016

Designed and implemented a user interface for the scrabble board, validated the word formed by the user, calculated score based on the word (letter and grid weightage) and realized the end of the game. Implemented and tested an algorithm for AI and game transition states. --Python

### Maximum Clique Problem- Paper Implementation

January 2016 - March 2016

Implemented the old and new algorithm for NP hard- maximum clique problem presented in the paper. Tested various optimizations and implemented it using vertex colouring technique. --C++

### Presentation on Javascript at ZEN

December 2015

Gave a two day presentation on Javascript to the trainees at ZEN introducing them to the software designing skills, describing the JS framework-Meteor, Google JS API and scripting Google spreadsheets for storing data without a server. --JS, Meteor, Google JS API

### Developed a Hotel Management System using Java

November 2015

Designed a prototype for the Hostel System and developed the GUI framework. Worked with serialisation and swings to store user data, check in and check out dates using a calendar and accordingly book a room based on it's availability. --Java

## Academic Courses

### Completed

• Data Structures & Algorithms • Design and Analysis of Algorithms • Object Oriented Analysis and Design • Paradigms Of Programming I & II • Computer Communication and Networking • Digital Design & Computer Organisation • Operating Systems • Unix Programming • Information Systems

### Ongoing

• Semantic Web Technologies • Web Technologies and Applications • Database Systems • Automata and Compiler Design • Parallel Computing • Distributed Computing Systems

## Achievements

1.Among Top 3 winning teams of the Microsoft code.fun.do online hackathon (Built Lighte-Android app which provides various services for the visually impaired people). Invited to the code.fun.do Finalists Forum and completed design, coding and demo milestone by extending features of Lighte. - May 2016

2.Received Certificate for completing the Applied CS with Android workshop conducted by Google. It involved developing Android Apps with various CS concepts (like A\* algorithm and Trie, HashMap, HashSet data structure) implementing it's features. - March 2016

3.Received Certificate of Excellence for completing iBTooth Robotix workshop conducted by Technophilia Systems in association with RCA Institute of USA. - October 2014

4.Got felicitated by the HRD minister of India, Mrs. Smriti Zubin Irani for exemplary performance in the 12th CBSE board examination. June 2014