



Dheeraj Reddy Kalmekolanu
Computer Science & Engineering
Indian Institute of Technology Bombay

120050061
B.Tech.
Male
DOB: 17-11-1994

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2016	8.36
Intermediate/+2	Board of Intermediate Andhra Pradesh	Narayana Junior College	2012	95.70
Matriculation	Secondary School Certificate Andhra Pradesh	Narayana Olympiad School	2010	94.16

Scholastic Achievements

- Secured All India Rank 45 in IIT JEE 2012 among 5,00,000 students
- Secured All India Rank 1 in VITEEE 2012 among 1,50,000 students
- Secured State Rank 4 in EAMCET 2012 among 2,70,000 lakh students
- Selected for Orientation Cum Selection Camp held at HBCSE Mumbai for top 35 in India for Junior Science Olympiad(2010) and Senior Astronomy Olympiad(2012)
- Received KVPY fellowship in SA stream for year 2010-2011 after being placed 50th in India
- Secured 3rd place state level in APAMT Exam held in 2009

Internship Experience

Code Search Engine

May 2015 - Jul 2015

Software Engineering Intern

LinkedIn

- Made an application using LinkedIn's native Search Engine (Galene) to search through LinkedIn's code
- Implemented a Kafka producer to produce updated code, which was then replicated into HDFS
- Wrote a Java parser to produce metadata regarding Java files to give IDE like experience during search
- Implemented regular expression search using trigram tokenization
- Received a Pre Placement Offer from LinkedIn for my work

Web Traffic Funneling

May 2014 - Jul 2014

Software Engineering Intern

Housing.com

- Devised a linear time algorithm to track user navigation from page to page, implemented it in Python
- Developed a flexible web application to visualize user navigation behavior on the website using Django
- Used highcharts APIs to implement a stacked representation of user flow the website with respect to various aspects like user id/session id, source of user visiting website

B.Tech Technical Project

Improving Telugu Optical Character Recognition

Ongoing

Guide: Prof. Saketha Nath

- Working on improving accuracies of Telugu documents using Tesseract ocr
- Working on language modelling using hidden markov models
- Using hierarchial classification and decision trees to distinguish similar alphabets

Academic Projects

Improving wordnet using wikipedia

Jul 2014 - Nov 2014

Guide: Prof. Pushpak Bhattacharyya

- Used the research paper Mapping WordNet to Wikipedia articles to improve the relevance of wordnet
- Used title matching and Information retrieval to get related articles
- Used Scurtu Document similarity API to get most related document
- Used alchemy api and extracted top 10 relevant words to that article as suggestions

Grapheme phoneme conversion

Feb 2015 - Apr 2015

Guide: Prof. Pushpak Bhattacharyya

- Designed an HMM based grapheme-phoneme and phoneme-grapheme convertor using Viterbi algorithm
- Used trigram and bigram approaches to predict the next phoneme or grapheme
- Also designed a neural network for these conversions
- Visualized the inaccuracies using confusion matrix and inferred the reasons for error

An Encrypted Messenger for texting and file transfer

Mar 2013 - Apr 2013

Guide: Prof. Amitabha Sanyal

- Made a single server, multiple client system using Scheme over TCP sockets
- To ensure privacy encrypted data using RC4, SDES and encrypted their keys in RSA
- Used multi-threading to make sure multiple processes can run in server simultaneously

Implementation of virtual memory in GeekOS

Mar 2015 - May 2015

Guide: Prof. Dhananjay Damdhare

- Simulated an OS Virtual Memory using Multi Level Page tables, page replacement policies, TLB
- Implemented System calls like sleep, Super pages for optimizing TLB, Page fault handling for paging

Http Server

Oct 2014 - Nov 2014

Guide: Prof. Varsha Apte

- Designed a HTTP1.1 Server that can handle GET and HEAD requests
- Implemented Multi-threading, Persistent connections, Queuing using Java socket programming

Sudoku Solver

Oct 2013 - Nov 2013

Guide: Prof. Abhiram Ranade

- The program is designed for a Sudoku puzzle using C++ and simple CPP graphics

A Physics Simulation Of Horse Chariot

Feb 2014 - Apr 2014

Guide: Prof. Parag Chaudhuri

- Made a Horse Chariot with a warrior on , trying to chase a moving object in Box2D
- Used Profiling tools like gprof and perf to improve performance of the code

Analyzing Buffer Replacement Policies in databases

Oct 2014 - Nov 2014

Guide: Prof. N.L. Sarda

- Simulated SQL operations like natural join, select and their various evaluation methods
- Designed several buffer replacement policies and analyzed its effect on each method of evaluation

Food Review and Rating System

Oct 2014 - Nov 2014

guide: Prof. N.L. Sarda

- Designed a food review and rating system using JDBC back end and JSP frontend
- Visualized the database using ER diagrams and conceptualized the relations using normalization

Skills

Programming languages	C, C++, Java, Python, Matlab
Web and Web Frameworks	HTML, CSS, Java Script, Django, Play, Dust
Databases Related	PostgreSQL, mongoDB, Hadoop, Pig
Scripting	Bash, Sed, Awk

Extra Curricular Activities and Interests

- Pursuing Honors Programme in Computer Science and Engineering
- Completed NSO in aerobics at IIT Bombay in an year long program
- Participated in Samwad where we discuss social issues, Participated in chess events in institute
- Interested in Natural Language Processing, Machine Learning, Cryptography and Security