Rahul Kumar Wadbude
Fourth year Undergraduate
CSE, IIT Kanpur
D-113/Hall 1,
Kalyanpur,
Kanpur (U.P., INDIA) - 208016

Email-id : **rahulwadbude2@gmail.com**
Mobile No.: **7753058915**
Alt Mob No.: **9479351355**

ACADEMIC DETAILS

Examination	Institute	Year	CPI/%
B. Tech. CSE	IIT Kanpur	2017(expected)	8.7
CBSE(XII)	JNV Hazaribagh	2013	96
CBSE(X)	JNV Betul	2011	10

AWARDS AND ACHIEVEMENTS

- Received Pre-Placement offer from **ADOBE** for performance during summer internship.
- Secured **AIR 983** in **JEE Advanced**, 2013 among 1,50,000 students.
- Secured **AIR 1533** in **JEE Mains**, 2013 among 1.5 million students.

SUMMER INTERNSHIP

- **Research Internship at Adobe** *(Guide: Dr. Kokil Jaidka, Dr. Niyati Chhaya , May'16 - July'16)*
  - Worked on Affective Content Categorization.
  - Developed a framework for automatic building of a domain specific affective topical lexicon.
  - Worked with NLP techniques like LDA, dependency parsing.
  - Worked with various correlation measures like Google hit based correlation, WordNet similarity measure, PMI, Chi-Square etc.
  - Conducted a survey on Amazon Mechanical Turk.
  - Worked with AWS machine.
- **Web Development at Foodmonk.com** *(May'15 - July'15)*
  - Used codeIgniter as framework for web development using a MVC design.
  - Managed the interaction of the site (Foodmonk.com) with databases.
  - Developed features for recommendation, login system, re-purchasing, food customization etc.
  - Developed model for interacting with android application to locate the locality of user using GPS.
  - Created a mess directory for users to register for a mess in their nearby localities.
  - Developed and maintained the back end functionality of the website.

TECHNICAL SKILLS

- **Programming Languages**: C++, Python, Scikit-learn library, Torch, OpenCV, Verilog, IA32, Javascript, PHP
- **Web Development** : HTML, CSS, JavaScript, PHP, JQuery
- **Other Tools**: Adobe Muse ,MATLAB , Latex,3Ds Max, Visual studio, GIT, Octave

COURSE PROJECTS

- **Modifying DPPnet ARCHITECTURE FOR VQA** *(Guide: Prof. Gaurav Sharma , July'16 - Present)*
  - Reproducing the results of "Image Question Answering using Convolutional Neural Network with Dynamic Parameter Prediction", an accepted paper of CVPR 2016.
  - Incorporating attention networks in the implementation inspired from other state of the art art papers on Visual Question Answering.
- **Vehicle detection and classification from traffic videos** *(Guide: Prof. Harish Karnick , Jan'16 - Apr'16)*
  - Performed Background subtraction to separate vehicles from background using MOG2/MOG/GMG modules of python-opencv.

- Tried various features representations (SIFT, SURF, DNN) for images. Caffe framework was used to extract DNN features.
- Tried random forest, SVM etc. algorithms from python sklearn to classify vehicles into cars, bikes etc.

- **Multiple Kernel Learning** *(Guide: Prof. Harish Karnick , Jan'16 - Apr'16)*
  - Learnt about relative kernel hilbert space, multiple kernel learning algorithm and hierarchical kernel learning.
  - Used Caltech multiclass object classification dataset with 102 categories. Used one-vs-rest SVM classifier with surf and convolutional deepnet (pretrained BVLC GoogleNet model) features. Caffe framework was used to extract DNN features.
  - Analyzed effects of linear, polynomial, rbf and sigmoid kernels using both features and svm classifier.
  - Implemented Simple MKL algorithm and analyzed effect of linear combination of kernels.

- **Operating Systems** *(Guide: Prof. Mainak Chaudhary , Aug'15 - Nov'15)*
  - Implemented significant pieces of functionality within the Nachos system using C++.
  - Implemented UNIX System calls to perform system tasks like I/O, fork, exit etc.
  - Implemented FIFO, SJF and Priority based scheduling to schedule the processes for execution.
  - Implemented various synchronisation using Semaphores and Conditional Variables.
  - Implemented Demand Paging to allow system to work with large code/data and small RAM.

- **Compiler** *(Guide: Prof. Subhajit Roy , Jan'16 - Apr'16)*
  - Made a Fully functional compiler to convert python 3 source code to x86 assembly code.
  - Implemented Lexer to tokenize python 3 source code using PLY module of python.
  - Implemented Parser to parse Python3 source code using PLY module of python.
  - Designed an IR Language and made a code generator to convert the IR Language to x86 assembly.
  - Implemented function calls, variable scoping, Recursion, Nesting of loops etc.

PROGRAMMING CONTESTS

- Solved **92** problems on CodeChef, an Indian coding platform.
- Solved **86** problems on Codeforces, a Russian coding platform.
- Solved **106** problems on SPOJ, a Polish coding platform.
- Ranked among **Top 1%** users on SPOJ.
- Ranked among **Top 3%** in CodeChef lunchtime(IOI style contest).
- Made a campus location windows app in **Microsoft Code.Fun.Do** 2015 using HTML and CSS.

RELEVANT COURSES

Recent Advances in Computer Vision*
Natural Language Processing*
Introduction to Machine Learning
Introduction to Data Structure and Algorithms
Algorithms-2
Linear Algebra
Probability and Statistics
Operating Systems
Computer Organisation
Computer Systems Security
Computing Lab
Fundamentals of Computing
Abstract Algebra
Theory of Computation
Logic in Computer Science
Compiler Design
Computer Networks*
Discrete Mathematics

(*current courses)

EXTRA-CURRICULAR ACTIVITY

- Prepared, organized and conducted fun and entertaining games over 4 days as the Fun Zone Co-ordinator during Udghosh '14.
- Participated in blood donation camps
- NCC CADET in 2-UPCTR (2013-2014)