Lucky Sahani

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EDUCATION

B.Tech, Computer Science and Technology
Indian Institute of Technology,Kanpur, expected May 2016

- CGPA(after 4 sems): **6.8**
- Precentage (10+2): **87.6%**
- GPA(High School): **9.2**

AREAS OF INTERESTS

- **Web Development**
- **Image Processing**
- **Machine Learning**

COMPUTER SKILLS

- **Web Development***:* HTML5, Node.js, CSS3, PHP, Ruby , Rails, MongoDB, Javascript, AJAX, Git, Jquery, MySQL
- **Coding Languages***:* C, C++, Python, Perl, Bash, XML, Java
- **Other tools***:* OpenCV , GNU Octave, Latex , MIPS.
- **Platforms***:* Windows, Linux , Android

PROJECTS

Bookie Joined on July 2014
Android app

JUTJA Joined on April 2014
Start up

- **Co-founder of a start up jutja.com**, a project management website with mind-mapped tasks.
- Designed the user interface of the website and is still working as the front-end developer of the website.
- Implemented the mind-mapped visualization of tasks using Vivagraph library in JavaScript.
- The website uses single-page interface to avoid reloading of webpage.

Video Surveillance Started May 2014
Mentor: Prof. Harish Karnick

- The project aimed at setting up an improvised video surveillance system to be set up at IIT Kanpur campus.
- Studied basic image processing and related machine learning algorithms, background subtraction techniques, ensemble learning methods, image classification methods
- Implemented a module based on Mixture of Gaussian (MOG) background subtraction algorithm and optical ow methods. Also constructed a cascade classifier based on Viola-Jones object detection framework and worked on licence plate recognition and character recognition.

- Currently working on creating an ensemble structure of MOG built on dierent features of images for efficient subtraction and decision tree learning for image classification.

Content Based Email Classifier May-June 2013

Mentor: Ayush Mittal

- The project involved creating a mail classier based on bag of words model using publicly available Enron mail database. Aimed at building an automatic categorising routine using the classier.
- Studied and implemented various supervised learning algorithms like Multiclass-SVM, Naive Bayes, Random forests. Also used basic natural language processing techniques like POS-tagging, stemming and separating word clusters.
- Acheived an accuracy of upto 80% on balanced datasets but due to high variance observed in such tasks accuracy down to 45% was also observed on some datasets.
- The main testing and classication module was built using python, python-nltk, scikit-learn, weka. A prototype for Gmail was also built using Google App script.

Planar Graph Visualisation Jan-Apr 2013

Mentor: Rizwan Hudda

- Studied basic Graph Theory and Algorithms along with various properties of Planar Graphs and heuristics of Graph drawing.
- Studied various methods to minimize crossings in Planar Graph Drawing for different type of data.

Hexxagon Sept-Nov 2012

Mentor: Sumit Bhagwani

- Main Aim of this project was to implement a game Hexxagon (http://www.miniclip.com/games/hexxagon/en/).
- The game is developed in python using pygame module and runs fine on a Linux platform.
- One can play it as a 2 player game as well as one player Vs AI.
- Two AI players labeled as easy and hard are developed for the same purpose.

Expanding Table Jan-Mar 2014

Mentor: : Dr. Shantanu Bhattacharya

- Worked in a team of six people and designed a mechanism for an expanding table on Autodesk Inventor.
- Used fabrication processes like lathing, drilling, machining, shaping.

SCHOLASTIC ACHIEVEMENTS

- Amongst top 3% in IIT-JEE 2012 among 500,000 candidates.
- Secured a rank among the top 10% of the candidates in organised by Indian Association of Physics Teachers.
- Attended a workshop about Nuclear science in Inter University Accelerator Centre, Nuclear Science Centre in Dec,2010.

OTHER ACTIVITIES

- Involved in discussion sessions based on algorithmic problems with **Prof. Surender Baswana** during summers 2012.
- Won in various Intra-College **Astronomy Competitions** in 2012 and 2013.
- Earned **Yellow Belt** in **Taek-Won-Do**.
- Won and Involved in various Intra College **Fine Arts Competitions** in 2012 and 2013.
- Organized and Involved in various Intra Hall **Fine Arts Competitions** in 2013.
- Active participation in cricket and volleyball throughout the last 2 years.

RELEVANT COURSES

- Fundamentals of Computing - A*
- Computing Laboratory-I
- Mathematics II (Linear Algebra)
- Probability And Statistics
- Data Structures and Algorithms
- Discrete Mathematics
- Abstract Algebra
- Operating Systems#
- Algorithms II#
- Theory of Computation#
- Computing Laboratory-II#
- Principal of Programming Languages#
- Computer Organization