

Sheshant

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Date of Birth: 22th June 1993

EDUCATION

Program	University	Performance	Year
BTech in Computer Science and Engineering	IIT Kharagpur	CGPA : 7.75/10	2016
Secondary School	Scholars Abode Patna	82.6%	2012
High School	St Karens High School Patna	85%	2010

SOFTWARE ENGINEERING SKILLS

- **PROGRAMMING LANGUAGES AND LIBRARIES:** C, C++, Java, Python, Mat Lab, OpenCV (c++), python-nltk, python-opencv, python-networkx, OpenMP C++ , Python-Pandas
- **OPERATING SYSTEM:** Comfortable with Linux, Windows 10, Kali Linux
- **SOFTWARES:** Visual Studio 2013, Eclipse, NetBeans, Solid works 2013, Microsoft office 2013, Mat lab (or Octave)
- **DATABASE:** MySQL, MS SQL, PostgreSQL

PROFESSIONAL EXPERIENCE

- **Intern at Samsung Research Institute, Bangalore** (May 15 – July 15)
 - It was based on image enhancement and deep learning
 - upscaling of image leads to blurring of image and so we need to restore the sharpness of the image
 - We used Convolutional Neural network for that purpose. Implemented forward propagation of CNN
 - Used the original image for ground truth and first downscale the image and then upscale the image by the same factor and use it for the input to our CNN and then perform learning and backpropagation. Implemented in c++ caffe
- **Backend Engineer at Edelweiss Financial Services** (June'16 - Present)
 - **Migration of Data from MySQL and MS SQL to PostgreSQL:** Created SQL commands for migration which includes Tables and views and function creation script. It also includes commands for data export and import to PostgreSQL.
 - **Technical Indicators:** Created functions for calculation of Technical indicators of stock in PostgreSQL.

ACADEMIC PROJECTS

- **Web Crawler** (Feb 2015)
 - Made a web crawler using python and xpath and stored it in MySQL database
 - Crawled the dataset for IMDB web page for top 250 movies with their star cast and also applied operations using python-networkx
- **Database for Medical Diagnostic center** (Mar 2015)
 - Designed a backend database system in MySQL for a software for medical records made in java.
 - It was supposed to store the records for all the tests and Doctors and all the patients who had appointments in the diagnostic health center.
- **Operating system** (Feb 2015 to May 2015)
 - Made a miniature version of shell in c which is supposed to perform some linux commands like ls, ls-l, mkdir, rmdir, cd, cp
 - assignments on semaphores and shared locks and message passing using shared memory.
- **Image processing** (Sept 2015)
 - Made a project on detecting false candies of irregular shape and size
 - Used erosion and dilation process for detecting how many candies are there and which candies have small shape than usual and which have large and also are they perfect circular or not and also detect their colour.
 - Implemented the above process using MatLab.

- **Computer vision** (Jan 2016 – April 2016)
 - Done some basic assignments for calculation of homography of 2 images and stitching them.
 - Calculating the epipolar geometry and other parameters in between 2 images
 - Identify the colours between 2 images via cie chromaticity chart and calculated the similarity between 2 images on the basis of chromaticity chart and apply clustering algorithm on them.
 - Implemented the above in Matlab.
- **Information Retrieval** (Mar 2016)
 - We have done a term project on extracting Wikipedia articles for a given research paper and also print them in most relevant order
 - We used unigram, bigram model as well as tf-idf to check the cosine similarity between 2 documents and also compared the results from user point of view also that which one is close to output given by user.
 - We used Python-NLTK library for our implementation
- **Machine Learning** (Aug 2015 - Nov 2015)
 - Implemented stochastic gradient descent, iterative re-weighted least square, k fold cross validation
 - Implemented in Matlab
- **R.P. Hall Open soft** (Mar 2016)
 - our project was based on extraction of data points from a scanned graph and store the data points in pdf file
 - We used Python-OpenCV to detect the graph and its ligand and then its corresponding colour of the ligand
 - We then detected the corner of the graph to check the start point and the end point of both the axis and then used tesseract ocr to detect the numbers on the axes to get scales of both the axes
 - We then get the coordinates of the points where the colour of the ligands are available and then we computed the actual value for those coordinates by using the scale value.
- **B-Tech Project** (Jan 2016 - May 2016)
 - My Btech project was on understanding vulnerabilities in wireless network and to understand the need for more security over Wi-Fi
 - I performed various attacks on wireless networks like cracking the WPA2 security password, DOS attack like TCP flood.
 - I used Kali-Linux Operating system for that purpose
 - Perform various spoofing (ARP, DNS, MAC) operations also on Wi-Fi