

Jeet Patel

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EDUCATION

April 2017	B.Tech (COMPUTER SCIENCE AND ENGINEERING)	IIT KANPUR	5.9/10.0
April 2013	Class XII (GUJARAT SECONDARY EDUCATION BOARD)	N.R. HIGH SCHOOL	87.00 %
April 2011	Class X (GUJARAT SECONDARY EDUCATION BOARD)	N.R. HIGH SCHOOL	90.60 %

INTERNSHIPS

CREDR

Incredible Technologies Pvt. Ltd.
Mumbai, India

DATA ANALYSIS INTERNSHIP
May '16 - Jul '16

WHATSAPP C2B

Mentored by Mr. Sudheer Katta, Head Analyst

- Launched an online bidding process for the bidding of second hand two wheelers.
- The system ran on Whatsapp web on Firefox using the **Selenium Webdriver** and the back-end was maintained on **PostgreSQL**.
- The entire system was completely automated, from user addition to the selling of the vehicle with only human intervention of adding new dealers to the whatsapp broadcast list.

BIKE SEGMENTATION

Mentored by Mr. Sudheer Katta, Head Analyst

- Used **Foreground GrabCut Algorithm** and **Watershed Algorithm** for foreground estimation from the given still image.
- Used Morphological Contour Evolution methods like **Morphological Geodesic Active Contours** and **Morphological Active contours without Edges** to segment bikes from the background.
- Used **Salient Object Detection** to extract the foreground vehicle from still images.

IIM LUCKNOW

Indian Institute of Management, Lucknow
Kanpur, India

MARKETING MANAGEMENT INTERNSHIP
May '15 - Jun '15

Mentored by Prof. Sameer Mathur

- Learned to improve presentation skills by following the concepts of Garr Reynolds, Jesse DesJardins & Nancy Duarte.
- Learned concepts of **Marketing Management** and applied them on case studies published by **Harvard Business School**.
- Analyzed an article published under Harvard Business Review on the aspects of '**Social Media as a tool for Marketing**'.

S.I.I.C

S.I.D.B.I Incubation & Innovation Center, IIT Kanpur
Kanpur, India

DEVELOPMENT INTERNSHIP
Nov '14 - Dec '14

ARTICLE SPINNER

Mentored by Mr. Rahul Garg

- The program allowed user to implement changes in an article by replacing verbs, nouns, etc. by better alternatives.
- Further, the program identified collocations on a primary level, rearranged paragraphs & lists, etc. to detect plagiarism.
- Semantic Questions** on a primary level along with answers could be generated from the article.

PROJECTS

NEURAL DIARY: GENERATING COMPACT VISUAL STORIES:

JAN '17 - APR '17

- Course Project** for course CS6980: Visual Recognition, under Prof. Vinay Namboodiri.
- Project aimed at generating **compact Visual Stories** from a long video of 15 min - 2 hrs.
- Implemented a sampling algorithm to sample a subset of frames to **reduce the bottleneck of computation**.
- Identified the **salient frames** by extracting the **VGG-features** of the samples and **comparing the L5 norm** of subsequent frames.
- Preprocessed the MS-COCO dataset and trained the **Show and Tell** model for generating descriptions of the salient frames.
- Deployed the entire network on local php server to view the compact Neural-Diary.

DUES CLEARANCE SYSTEM:

JAN '17 - APR '17

- Course Project** for course CS315A: Principals of Database Management System, under Prof. Medha Atre.
- Project aimed at making an online no-dues clearance system to facilitate no-dues clearing procedure.
- Maintained a two-layer security, the second layer providing access specific functions of the system.
- Added a complain mail resolution module to facilitate discrepancies in the data.

PEER-TO-PEER NETWORKS: EVOLUTIONARY GAME THEORETIC APPROACH:

JAN '17 - APR '17

- Course Project** for course CS785A: Multiagent Systems: Games, Algorithms, Evolution, under Prof. Harish Karnick.
- Project aimed at conducting an evolutionary game-theoretic analysis on Peer-to-Peer networks.
- Evaluated traditional evolutionary game theoretic models like **Hawk-Dove** and **General Prisoner's Dilemma** and analyzed their feasibility on peer-to-peer networks.
- Formulated **Monetary** and **Contribution** based models and evaluated their feasibility on representing peer-to-peer networks.
- Formulated a penalty mechanism to tackle the problem of **free-riding and white washing**.

UNAMBIGUOUS OBJECT DESCRIPTION:

AUG '16 - NOV '16

- **Course Project** for course **CS698U**: Recent Advances in Computer Vision, under **Prof. Gaurav Sharma**.
- Project aimed at implementing the generation network as described in the CVPR '16 paper, *Generation and Comprehension of Unambiguous Object Descriptions*.
- Pre-processed and extracted the **VGG features** of the images of **MSCOCO** dataset and implemented the **Generation** model.
- Implemented the **Neural Talk model** on MS-COCO dataset for 2 different splits in-order to compare the results generated by the two models i.e. Neural Talk one and the one described by the paper.

ASPECT BASED SENTIMENT ANALYSIS:

AUG '16 - NOV '16

- **Course Project** for course **CS676A**: Introduction to Natural Language Processing, under **Prof. Harsih Karnick**.
- Project aimed at identifying aspect terms from a given review and assign polarity to the extracted aspect.
- Used the **SemEval 2014** dataset for training and 200 manually annotated Amazon Fine Food Reviews dataset for testing.
- Used the **GoogleNews** pretrained word embeddings to represent the data and appended POS Tag features to it.
- Used **CNNs** to extract the aspects and **GRUs** for assigning polarity to the extracted aspect.

REAL TIME CLASSIFICATION OF OBJECTS:

JAN '16 - APR '16

- **Course Project** for course **CS771A**: Machine Learning: Tools & Techniques, under **Prof. Harish Karnick**
- Project aimed at Real-time classification of object from video stream into **2 wheelers, 4 wheelers** and **pedestrians**. Also, to find the **unique best pose** of a same person appearing in the video stream.
- Processed the video frames to extract candidate regions using **SIFT, HoG** and **CNN using fc7 features**.
- Performed classification on the extracted regions using SVM's, Random Forest and **Voila-Jones Face Detection Algorithm** to detect the faces and fine-tuned the parameters to suit our dataset.

R COMPILER:

JAN '16 - APR '16

- **Course Project** for course **CS335A**: Compiler Design, under **Prof. Subhajit Roy**
- Built an **end-to-end** compiler for a subset of the programming language **R to x86** Machine Architecture.
- Implemented a Lexical Analyzer and Assembly-Code Generator in python, constructed grammar rules for parsing our identified language and created the TAC (Three Address Code) for intermediate code. Used Ply – lex and yacc library in Python.
- The compiler handled **basic arithmetic operations, conditional statements, loops and functions**.

NACHOS OPERATING SYSTEM:

JULY '15 - NOV '15

- **Course Project** for course **CS330A**: Operating Systems, under **Prof. Mainak Chaudhuri**.
- **Extended** the **NachOS** operating system to perform basic operating system functions including **Fork, Join, Sleep** and **Exec**.
- Implemented and evaluated performance of various algorithms for scheduling processes.
- Developed and added support for **Demand Paging, Shared Memory, Condition Variables** and **Semaphores**.

TECHNICAL SKILLS

Programming Languages: C, C++, PYTHON, R, GNU OCTAVE, ASSEMBLY (VERILOG), CSS, JAVASCRIPT, PHP, MYSQL
Software and Utilities: GIT, GNUPLOT, L^AT_EX, AUDACITY, LIGHTROOM, PHOTOSHOP
Libraries: OPENCV, KERAS, TENSORFLOW, SFrames, SCIKIT-LEARN, NLTK

RELEVANT COURSES

<i>Computer Science</i>	Visual Recognition, Computer Architecture, Recent Advances in Computer Vision Introduction to Natural Language Processing, Machine Learning Techniques, Compilers, Operating Systems Principles of Database Management System, Advanced Algorithms Theory of Computation, Data Structures & Algorithms, Fundamentals of Computing.
<i>Math</i>	Probability and Statistics, Discrete Math, Logic, Abstract Algebra, Linear Algebra & ODE, Fundamentals of Calculus.
<i>Finance</i>	Project Management, Security Analysis, Derivatives & Portfolio Management, Management Information System, Introduction to Economics.

POSITIONS OF RESPONSIBILITY

<i>Apr '15 - Apr '16</i>	Coordinator, Dance Club Conducted dance workshops and events along with managing regular club activities under a tight budget of INR 1,00,000 . Organized and managed Dance Extravaganza, the annual dance showcase of Dance Club that comprised of 40+ performances with participation of 100+ students in a short span of 2 weeks . Led a team of 20 members for participating in inter college dance competitions.
<i>October '15</i>	Contingent Leader, Rendezvous'15 Lead a contingent of 120 students participating in Rendezvous, the cultural festival of IIT Delhi. Made all the arrangements of travelling and accommodation of the contingent. Also, catered to the registration of every individual in their respective events.

EXTRA CURRICULAR ACHIEVEMENTS

<i>Cultural</i>	Won 3rd and 2nd prize respectively in Tour De Force'15 and Tour De Force'14 , a street dance competition conducted during Antaragni, comprising of a team of 12 students . Won 3rd prize in Jitterbug'14 and Jitterbug'13 , a group dance competition comprising of team of 20 students each.
<i>Miscellaneous</i>	Won 1st prize in Decrypt , the flagship case study competition among 300+ entries received all over the country conducted during ESummit'15 along with the prize of INR 20,000 . Won 1st prize in Morse Code, Takneek'13 which required to decode and identify words based on the morse code. Won 1st prize in Black Box, Takneek'13 which required to code a few programs in programming language : Zombie in a short span of 1 hour.

SOCIAL ACTIVITIES

<i>Mar '16</i>	Organized an event Rang Jama De for the first time in campus on the occasion of <i>Holi</i> which fetched a participation of over 500 people of campus community.
<i>Jun '15</i>	Conducted and lead a Flash Mob with a team of 30 students in front of an audience of over 400 people on the occasion of World Environment Day
<i>Jun '14</i>	Was part of a Flash Mob in a team of 20 students conducted on the occasion of World Environment Day.

INTERESTS

Computer Vision
Machine Learning
Dance

Natural Language Processing
Artificial Intelligence
Sporadic Foosball & Pool Player