

Shubham Chandel

CONTACT

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RESEARCH INTERESTS

Reinforcement Learning, Neural Networks, One-shot Learning

EDUCATION

Indian Institute of Technology, Mandi (Aug 2013 - Present)

B.Tech. in Computer Science and Engineering

Grade Point Average (GPA) of 8.62/10 (till the end of 6th Semester)

P.K.R Jain Public School, Haryana (Mar 2013)

12th Standard, CBSE

Grade - 95.4%

P.K.R Jain Public School, Haryana (Mar 2011)

10th Standard, CBSE

GPA: 10/10

WORK EXPERIENCE

Research Intern, Flipkart Research India (June 2016 - August 2016)

- Given user return reviews, extracted best set of return reason per category, identified incorrectly annotated returns and predicted correct reason for return.
 - Researched various feature representation methods for text data like count vectors, tf-idf vectors, Gensim's Word2Vec and Doc2Vec vectors. RAKE for keyword extraction along with DBSCAN for vector clustering were used.
 - Analyzed 5.8M customer reviews across 2.7K product verticals.
- <https://github.com/shubham-chandel/ReturnAnalysis>

ACADEMIC PROJECTS

Face Detection, Recognition and Representation (Aug 2016 - Present)

- Detection and recognition of Human Faces in context of classrooms and meetings. Used for the purpose of automating the attendance process.
 - HOG features for detection, CNN architecture similar to AlexNet for embedding and recognition, DBSCAN for headcount.
- <https://github.com/sksq9/cnn-face-recognition>

Social Media Analytics (Mar-May 2016)

- Detection of an uncalled situation using tweets from Twitter Streaming API.
- Distributed the data across number of Hadoop nodes to gain performance. An AWS node was used 24/7 as a data collection platform.
- NLTK and Stanford Tagger for named entity recognition of tweets.

Neo4J Performance Analysis (Mar-May 2016)

- Analyzed panama papers on Neo4j to test performance metric of database.
- Gained insightful results on both performance and the leak itself.

File Tone Transfer Protocol (Sept-Nov 2015)

- Used the power of audio to transfer files between different machines.
- File was converted to sound and then frequency modulated to transfer to all devices within ear-shot.

The Living Door - IoT Product (Apr-May 2015)

- Developed an IoT product that could be controlled with an android application.
- A home security door, that senses the motion of visitor and inform the owner via the

android application.

NON
ACADEMICS
PROJECTS

Colorize Grayscale Images (Dec 2016)

- CNN used to to automatically colorize black and white photos.
- Used pre-trained VGG-16 model from Caffe model zoo.

<https://github.com/sksq9/cnn-colorize>

One Shot Learning (Oct 2016)

- K-Nearest Neighbor classifier along with LSTM to form embedding vector.
- Encoding of training example depends on it's embedding and other examples.
- Paper: Matching Networks for One Shot Learning

Deep Q Network - Flappy Bird (June 2016)

- Trained a Deep neural-net using Q-Learning algorithm to play flappy bird.
- Gained human level performance after ~30hrs of training.
- Paper: Human-level control through deep reinforcement learning

<https://github.com/sksq9/dqn-flappybird>

Customer Perception Business Intelligence (May 2016)

- Developed a business dashboard for small and medium scale businesses to analyse customer's perception.
- Sentiment analysis used to generate temporal and spatial data from multiple sources allowing the businesses to do a feature based analysis of one's business.

<https://github.com/sksq9/prodigy>

Tinder for Product Hunt (Dec 2015 - Feb 2016)

- Developed android app with Tinder interface to browse daily Product Hunt products.
- Implemented using Ionic framework.

Himachal Police Android App (Aug-Nov 2015)

- Developed HP Police application for online centralized storage of data.
- Vehicle theft and other *challans* throughout the state are recorded in the application by officers at all *Nakas* and stored online.

King's Bot (June 2015)

- Developed an AI bot which analyzed the moves of opponent & moved in such a fashion to encapsulate the adversary inside a wall.
- The web application was developed in Python using Flask.

NetConnect - Data on fly (Jan-Feb 2015)

- Developed an android application for people in regions with the sparse internet connection.
- The android application allows the user to mark preferences and data will be downloaded as when net connected.

<https://github.com/sksq9/NetConnect>

Team leader Inter IIT '15, KGP.

RELEVANT
COURSES

- Discrete Mathematics
- Linear Algebra and Calculus
- Data Structures and Algorithms-I & II
- Probability and Statistics
- Operating System
- Networking and Systems
- Design of Concurrent System
- Digital Image Processing

- Pattern Recognition
- Data Mining
- Big Data and MapReduce
- Artificial Intelligence
- Machine Learning*
- Reinforcement Learning*
- Neural Networks for Machine Learning*
- Deep Learning*
- Convolutional Neural Network for Visual Recognition*

* *MOOC Courses*

TECHNICAL SKILLS

Proficient Languages: Python, JAVA

Other Languages: C, C++, Scheme, PHP, JavaScript

ML Frameworks: Scikit Learn, TensorFlow, Weka

Web Technologies: Flask, Bootstrap, Node, AngularJS, Ionic

Database: SQL, Neo4J, MongoDB

Distributed Computing: Hadoop, Spark, OpenMPI

Other Skills: Android Development, Cloud Computing, Raspberry Pi, Photoshop

POSITION OF RESPONSIBILITY

Teaching Assistant: Large Application Practicum (Aug-Nov 2016)

Club Coordinator: Mobile Application Development Club (May 2015 - May 2016)

Teaching Assistant: Database Practicum (Aug-Nov 2015)

Team Coordinator: Design Practicum (May-June 2015)

Team Head: 3rd Inter IIT TechMeet '15 (Dec 2014 - Jan 2015)

Design & Web-Development Coordinator: Exodia '15 (Jan-Mar 2015)