

Dushyanta Dhyani

Curriculum Vitae

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Areas of Interest

○ Machine Learning ○ NLP ○ Computer Vision ○ Algorithms

Education

- 2010–2014 **Bachelor of Technology**, *National Institute of Technology, Kurukshetra, India.*
GPA – 8.9 (Information Technology)
- 2010 **Higher Secondary (ISC)**, *Summer Valley School, Dehradun, India, 95.5% , 2nd in School .*
Science (with a 100% score in Mathematics)
- 2008 **High School (ICSE)**, *Riverdale High School, Dehradun, India, 95.2% , 3rd in School.*

Experience

Research

- July, 2015 - **Research Associate**, *PRECOC RESEARCH GROUP , IIIT-DELHI .*
As part of a government funded project, I worked on building a tool for predictive policing. The work involved application of Data Mining techniques to build an interface for effective monitoring and visualization of crime patterns.
- Jan-
June, 2015 **Research Assistant**, *UBIQUITOUS KNOWLEDGE PROCESSING LAB, TECHNISCHE UNIVERSITÄT DARMSTADT , Germany .*
Advisor : Prof. Dr. Iryna Gurevych
Project : Automatic Timeline Generation of News Events.
Worked on extracting Event, Participant and temporal information from data to create Chronological Ordering of news events. Using various NLP based feature engineering techniques like NER, SRL, Word Embeddings, etc. to train using a Conditional Random Field Classifier.

Industrial

- June-
Dec, 2014 **Software Engineer**, *Search Team INFOEDGE , New Delhi, India.*
○ Successfully ported the *Solr* based backend framework of 99acres.com to *Solr Cloud*.
○ Created *Scalable Logging Services* to Log Search and Click Data of 99acres.com.
○ Created services to automate the procedure of Data management and Monitoring.
- June-
July, 2013 **Software Engineering Intern**, *SAMSUNG RESEARCH , New Delhi, India.*
Team - *Cloud DB*. Worked on the *Hadoop Framework* for the E-School Server Project.

Entrepreneurial

- May-
Oct, 2014 **Freelance Software Developer**, *FUNNELMAILAPP.COM , US Based Tech Startup.*
I worked on prototyping and building the Intelligence System behind the funnel mail app.
- March-
April, 2014 **Founder, Developer**, *GOINDIAVOTE , Startup.*
Conceptualizing and developing backend framework for GoIndiaVote, Efforts were cited by the Entrepreneurial media platform [YourStory](#)

Teaching

- 2013 **JavaScript Instructor**, *Graphics and Web Designing Committee, NIT Kurukshetra.*
Conducted workshops to teach incoming freshmen and Sophomores Javascript, its web applications and various hacks around it.

Open Source Contributions

- 2015 **Object Proposals** .
Integrated the **Geodesic Object Proposals** into the **Object Proposals** library.

Projects

- Jan-May, 2014 **Clustering Based Feature Selection for Network Intrusion Detection** , *B.Tech Project*, NIT Kurukshetra.
Analyzed and proposed a clustering based feature selection approach that builds a weighted error model to remove less contributing features. The resulting features were then tested on several classifiers which resulted in comparable cross validated results with a significant reduction in training time.
- April'15- **SVMLITE** , *Ongoing Independent Project*.
An implementation of Platt's Sequential Minimal Optimization algorithm for Support Vector Machine Classification with support for Java and CUDA.
- December'15- **HoG Feature based Face Detection with Sliding Window** , *Ongoing Independent Project*.
 - Worked on implementing the sliding window detector approach by Dalal and Triggs for face detection.
 - Implemented Histogram of Oriented Gradients (HoG) features in Python.
 - Designed and Trained an SVM Classifier using the positive database from the Caltech 10,000 Web Faces Project . Hard negative mining was used on a database from a subset of the SUN Database
- Feb'16- **DeepAge** , *Ongoing Independent Project*.
A Deep Learning based tool that utilizes Convolutional Neural Network for the task of determining age of a person from facial images.
- Sep-Oct, 2012 **MiniOS** , *Course Project*.
A miniature version of an x86 Operating System consisting of the following components.
 - File System supporting Directories, Sub Directories and Files.
 - A miniature shell supporting basic commands like ls,mkdir,cd,del,execute etc.
 - A Process table with maximum 8 processes.
 - Context Switching between the processes using Round Robin Scheduling.
- December'15- **Facial Keypoints Detection** , **Kaggle** , *Ongoing Independent Project*.
 - Working on using Convolutional Neural Nets for the task of predicting various facial keypoints.
 - Testing various architectures of CNN's using Lasagne.
- Dec'14-Mar, 2015 **Plankton Classification** , *National Data Science Bowl Contest*, Kaggle, Position- 646 out of 1049 teams.
Worked on extracting various structural features of plankton's, which were then used on a Random Forest Classifier.
- July-Aug, 2014 **Language Identifier for Short Text Segments** , *Independent Project*.
Successfully created a Language Identification (LI) / Text Categorization Tool that uses an N-gram Model along with a Naive Bayes Classifier.
- Sep-Oct, 2013 **FSPAM** , *Independent Project*.
Built a spam filtering tool for HAM/SPAM classification. Besides classification using a Naive Bayes Classifier, a preprocessing pipeline for TF-IDF vectorization and Lemmatization was constructed.

Seminars

- 2014 **Gaussian Vs Uniform Distribution for Intrusion Detection in Wireless Sensor Networks** , *Under the Supervision of Assistant Prof. Virender Ranga*.
- 2013 **Application of Supervised Machine Learning in NLP** .

Technical Skills

Programming Languages	C,C++/STL, Java , Octave, Matlab,Python
Data Processing Tools	Hadoop, Solr, Sqoop, Scikit-Learn, NLTK
Parallel Computing Tools	CUDA
Other Tools	L ^A T _E X, Vim , Git, SVN
Web Development	HTML/CSS, JS,jQuery, Php/CodeIgniter
OS	Linux (Ubuntu), Windows

Awards and Honors

- Ranked **7850** in **AIEEE-2010** out of **1.3 Million** students.
- Qualified for onsite Asia Finals of **ACM-ICPC, Amritapuri**.
- Stood **4th in India** in the **INCA (Indian National Cartographic Association)** Map Quiz in 2007.
- Stood **2nd** in the North- India finals of **TCS IT Wiz Quiz**,2009.
- Awarded the **S.S. Oberoi Memorial Trophy** for High Sense of Loyalty and belonging to the school.
- Ranked **313** out of **2880** and **323** out of **4263** participants worldwide in the July'13 and November'13 Contest respectively on Codechef.com
- Ranked **31st** out of **546** participants in the GSF Hacks Contest
- Ranked **4th** out of **334** participants in the Dandi March Contest
- Ranked **4th** out of **478** participants in the Mobikwik Hiring Challenge

Positions of Responsibility

- *School Prefect* , Summer Valley School
- *Member* , English Literary and Debating Club, NIT Kurukshetra
- *Instructor*,Graphics and Web Design Committee, NIT Kurukshetra
- *Member* , Official Magazine of NIT Kurukshetra
- *Member* , Editorial Board, Summer Valley School
- *Vice Captain* , Junior Soccer Team, Riverdale High School