ASHOK KUMAR PANT

Kathmandu, Nepal | ashokpant87@gmail.com | https://ashokpant.github.io |
https://github.com/ashokpant/

OVERVIEW

I am a Machine Learning software developer and researcher with comprehensive knowledge on Deep learning and other state-of-the-art machine learning techniques. I am a Computer Vision and Natural Language Processing expert having a production level experience on various related problem-solving techniques.

PROFESSIONAL SUMMARY

- Over **five years of** experience in **computer vision**, **natural language processing, deep learning** and other **machine learning** technologies.
- Comprehensive knowledge of **pattern recognition** and **data mining.**
- Proficient programmer in **Java, Scala, C++, MATLAB,** and **Python**.
- Experience in developing **RESTful APIs** in Jersey and Spring Framework.
- Expert in developing **scalable, distributed and cross-language services.**
- Experience in using project management and team collaboration tools such as Basecamp, Jira, Github, Bitbucket and Slack.

EDUCATION

Master of Science, Computer Science Tribhuvan University, Kirtipur, Kathmandu, Nepal	2012
Bachelor of Science, Computer Science Tribhuvan University, Mahendranagar, Kanchanpur, Nepal	2008
PCL, Physical Science Tribhuvan University, Mahendranagar, Kanchanpur, Nepal	2005

TECHNICAL SKILLS

Languages:	Java, Scala, C/C++, MATLAB, Python, Dot.Net, JavaScript, HTML5, CSS3
ML/DL Tools:	Weka, Caffe, DL4J, TenserFlow, LibLinear, LibSVM, MLlib, Spark, Mahout, mlpack, DLib, scikit-learn
CV Tools:	OpenCV, DLib, CCV, VLFeat, scikit-image
NLP Tools:	CoreNLP, OpenNLP, NLTK
IDE/Dev. Tools:	Vim, Sublime, Intellij Idea, CLion, WebStorm, PyCharm

Databases:	LMDB, LevelDB, MongoDB, MySQL, MsSQL, Oracle
Version Controls:	Github, Bitbucket, Gitlab
Servers:	Apache, Nginx
Web Dev.:	Wordpress, Drupal, Meteor
Serialization/RPC tools:	Thrift, Protocol Buffers
Misc.:	MS Office, Photoshop, Latex, etc.

RESEARCH AND PUBLICATIONS

1. Acharya S., **Pant AK**., Gyawali PK., "Deep Learning Based Large Scale Handwritten Devanagari Character Recognition", *9th International Conference on Software, Knowledge, Information Management & Applications*, Kathmandu, Nepal, 15 -17 December 2015.

2. Pant AK., Acharya S., Gyawali PK., "Automatic Nepali Number Plate Recognition with Support Vector Machines", *9th International Conference on Software, Knowledge, Information Management & Applications, Kathmandu*, Nepal, 15 -17 December 2015.

3. Pant AK., Yadav A., "Sentiment Analysis on Nepali Movie Reviews using Machine Learning", Researcher CAB, *A journal for Research and Development*, vol. 1, no. 1, pp. 89-97, 2014.

4. Pant AK., Panday SP., Joshi SR. "Offline Nepali Handwritten Character Recognition Using Multilayer Perceptron and Radial Basis Function Neural Networks", *Third Asian Himalayas International Conference on Internet AH-ICI 2012*, Kathmandu, Nepal, 24 November 2012.

EXPERIENCE

Sr. Machine Learning Software Engineer
iLoop LLC. (https://iloop.com/)
Innovisto Pvt. Ltd., Kathmandu, Nepal, ***Nov 2015 - Present***

- *Developed smart event calendar system to suggest user preferred time and locations.*
- *Developed machine learning based collaborative and content based recommendation modules to recommend users, items, places and events.*
- *Developed machine learning based (next event/next time/next location) prediction modules.*
- *Developed a system to extract, resolve and normalize times/dates from raw input text using Natural Language Processing.*
- *Developed an image processing module to crop,resize and enhance images.*
- *Developed a system to extract event title and classify event type from input text.*

Languages: Scala/Java *(for General Purpose/ Machine Learning / NLP) , C++ (Image processing/ Map processing), Lua/Python (Machine Learning/NLP)*

Libraries/Frameworks: CoreNLP, OpenNLP, OpenCV, OSRM, DL4J, TenserFlow

Sr. Biometrics Software Engineer
TekTak Nepal Pvt. Ltd, Kathmandu, Nepal, **Oct 2013– Nov 2015**

- *Developed face recognition system (detection, alignment, recognition and verification) using deep learning technology using C++, MATLAB(for Research), OpenCV and Caffe.*
- *Developed a system to write on image with automatic text color using C++ and OpenCV.*
- *Research and development of new computer vision and machine learning algorithms for object detection and classification.*
- *Developed collaborative filtering based user recommendation system using Java and Mahout.*
- *Research and development of video streaming technology using C/C++, FFmpeg and H.264.*

Image Processing Software Developer
Technoessence Pvt.Ltd., Kathmandu, Nepal, **Sept 2014– Oct 2015 (Part Time)**

- *Developed Fish recognition system (detection, segmentation, alignment and recognition) using C++, OpenCV and Caffe.*
- *Responsible for the selection of computer vision and machine learning algorithms to achieve the most accurate and efficient recognition system.*

Software Developer
Desognco Nepal Pvt. Ltd, Kathmandu, Nepal, **Jun 2011– Sept 2013**

- *Developed web based University Marks processing System using Java, JSP, Spring framework and Oracle 10g.*
- *Designed and Implemented reporting modules using JasperReports.*
- *Implemented some core modules of Payroll System.*
- *Conducted a case study on cloud computing based telecommunication system for Nepal Telecom.*

PROJECTS

Facial Expression Recognition System (2016)
Machine Learning(SVM) based human facial expression recognition system that can detect seven basic facial expressions (Angry, Disgust, Fear, Happy, Neutral, Sad and Surprise) and is implemented using C++ and OpenCV.

Face Recognition System (2016)
Deep Learning based large Scale face recognition and verification system. It includes face detection, 2D alignment and tracking.
Tools: C++, Python, Caffe, OpenCV, Dlib, TLD.

Face Detection Naked (2016)
OpenCV haar–cascade based face detection is naked for its internal stages. (link: https://github.com/ashokpant/detection-naked)

Large Scale Data Clustering System (2016)
Implemented various data clustering algorithms (EM, K–Means, XMeans,

DBSCAN, Hierarchical) to cluster large scale Insurance data using Java and Weka.

Information Retrieval System (2014)

Information retrieval from web-links, text documents using Java and Jsoup.

Nepali Text Summarization System (2014)

Sentence extraction based Nepali document summarization system implemented using Java.

Nepali Document Classification System (2013)

Machine learning (Naive Bayes and ANN) based multi-class(business, crime, education, health, sport) nepali document classification system implemented using Java.

Nepali Named Entity Recognition System (2013)

Machine Learning (SVM) based Nepali Named Entity(Person, Location, Organization, Misc.) Recognition system implemented using Java.

Graph Coloring System (2013)

Graph coloring system is a vertex coloring system with the constraints that no adjacent vertices share common colors. This system is implemented using MATLAB.

Nepali Handwritten Character Recognition System (2012)

Machine learning(ANN) based Devanagari character (consonants -36, vowels-12 and numerals-10) recognition system implemented using MATLAB.